		DEPARTMENT	ATE OF UTAH OF NATURAL RES F OIL, GAS AND I				FOR	RM 3	
APPLI	CATION FOR	PERMIT TO DRILL	-			1. WELL NAME and	NBU 921-35N4BS		
2. TYPE OF WORK  DRILL NEW WELL	REENTER P	&A WELL DEEPE	N WELL			3. FIELD OR WILD	CAT NATURAL BUTTES		
4. TYPE OF WELL Gas We	ell Coalt	oed Methane Well: NO				5. UNIT or COMMU	INITIZATION AGRE	EMENT NAME	
6. NAME OF OPERATOR KERF	R-MCGEE OIL &	GAS ONSHORE, L.P.				7. OPERATOR PHO	NE 720 929-6007		
8. ADDRESS OF OPERATOR P.O	. Box 173779, [	Denver, CO, 80217				9. OPERATOR E-M. Kathy.Schn	AIL eebeckDulnoan@ana	darko.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)		11. MINERAL OWNE				12. SURFACE OWN	IERSHIP		
UO 01194 ST	- 'foo'\	FEDERAL IND	IAN STATE (	9	FEE (		IDIAN STATE		
13. NAME OF SURFACE OWNER (if box 12							IER PHONE (if box		
15. ADDRESS OF SURFACE OWNER (if box	( 12 = 'fee')						IER E-MAIL (if box	12 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C			NO 💮	VERTICAL DI	RECTIONAL 📵 H	ORIZONTAL 🛑	
20. LOCATION OF WELL	FC	OOTAGES	QTR-QTR	9	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	388 FS	SL 1770 FEL	SWSE		35	9.0 S	21.0 E	S	
Top of Uppermost Producing Zone	410 FS	6L 2164 FWL	SESW		35	9.0 S	21.0 E	S	
At Total Depth	410 FS	SL 2164 FWL	SESW		35	9.0 S	21.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN	E (Fe	et)	23. NUMBER OF A	CRES IN DRILLING	UNIT	
		25. DISTANCE TO N (Applied For Drilling							
27. ELEVATION - GROUND LEVEL		28. BOND NUMBER				29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE			
5100			22013542			Permit #43-8496			
		A	TTACHMENTS						
VERIFY THE FOLLOWING	ARE ATTACH	IED IN ACCORDAN	CE WITH THE U	ТАН	OIL AND	GAS CONSERVAT	ION GENERAL R	ULES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUF	RVEYOR OR ENGINEER	R COM	IPLET	E DRILLING	G PLAN			
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EEMENT (IF FEE SURF	ACE) FORI	4 5. I	F OPERATO	R IS OTHER THAN	THE LEASE OWNER		
DIRECTIONAL SURVEY PLAN (IF DID DRILLED)	RECTIONALLY	OR HORIZONTALLY	г торо	OGRA	PHICAL MA	P			
NAME Danielle Piernot	1	TITLE Regulatory Analys	st		PHONE 72	20 929-6156			
SIGNATURE	С	DATE 11/23/2010			<b>EMAIL</b> gn	bregulatory@anadark	co.com		
<b>API NUMBER ASSIGNED</b> 43047513950000		APPROVAL			Bo	ocyill			
	1				Peri	nit Manager			

API Well No: 43047513950000 Received: 11/23/2010

	Propo	osed Hole, Casing, ar	nd Cement		
String	Hole Size	<b>Casing Size</b>	Top (MD)	Bottom (MD)	
Prod	7.875	4.5	0	9884	
Pipe	Grade	Length	Weight		
	Grade I-80 Buttress	9884	11.6		

API Well No: 43047513950000 Received: 11/23/2010

	Prop	oosed Hole, Casing, a	and Cement		
String	Hole Size	<b>Casing Size</b>	Top (MD)	Bottom (MD)	
Surf	11	8.625	0	2540	
Pipe	Grade	Length	Weight		
	Grade J-55 LT&C	2540	28.0		

Drilling Program 1 of 24

NBU 921-35N4BS

## Kerr-McGee Oil & Gas Onshore. L.P.

## NBU 921-35N4BS

Surface: 388 FSL / 1770 FEL SWSE BHL: 410 FSL / 2164 FWL SESW

Section 35 T9S R21E

Unitah County, Utah Mineral Lease: ST UT UO 01194 ST

## **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## 1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1441	
Birds Nest	1718	Water
Mahogany	2094	Water
Wasatch	4695	Gas
Mesaverde	7416	Gas
MVU2	8316	Gas
MVL1	8867	Gas
TVD	9666	
TD	9,884	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

## 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

#### 6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

NBU 921-35N4BS

Drilling Program 2 of 24

#### 7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 9,666' TVD, approximately equals 5,922 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,795 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

#### 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

**Drilling Program** 3 of 24

NBU 921-35N4BS

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie

NBU 921-35N4BS Drilling Program

line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter 4 of 24 productive formations.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

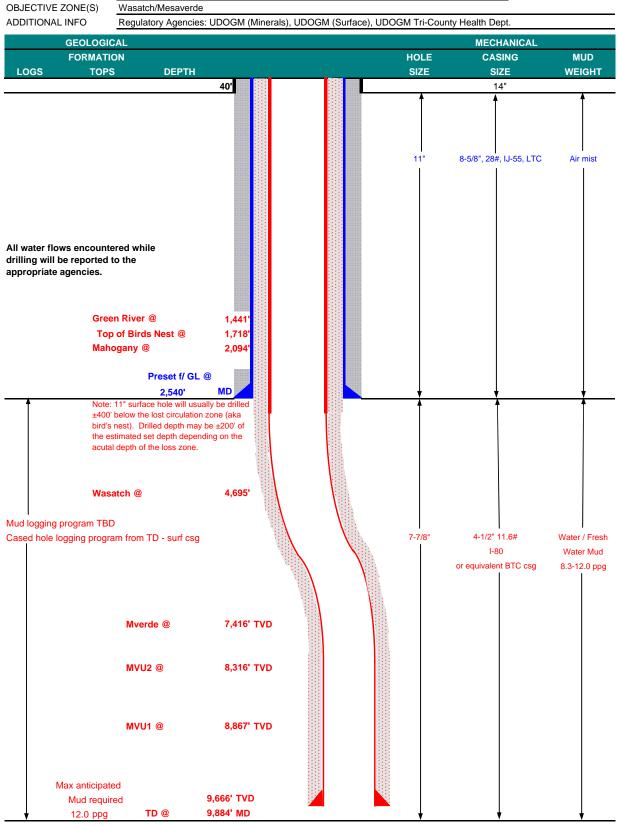
## 10. <u>Other Information:</u>

Please refer to the attached Drilling Program.



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE November 18, 2010 NBU 921-35N4BS WELL NAME 9,666' TVD 9,884' MD COUNTY Uintah FINISHED ELEVATION FIELD Natural Buttes STATE Utah 5,100' SURFACE LOCATION **SWSE** 388 FSL 1770 FEL Sec 35 T 9S R 21E Latitude: 39.986359 Longitude: -109.515096 NAD 27 BTM HOLE LOCATION SESW 410 FSL 2164 FWL Sec 35 T 9S R 21E Latitude: 39.986366 -109.519923 NAD 27 Longitude: Wasatch/Mesaverde ADDITIONAL INFO





## KERR-McGEE OIL & GAS ONSHORE LP

#### **DRILLING PROGRAM**

#### **CASING PROGRAM**

									DESIGN FACT	TORS	
	SIZE	INTI	ERVAL	_	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	
SURFACE	8-5/8"	0	to	2,540	28.00	IJ-55	LTC	0.85	1.58	4.84	
								7,780	6,350	278,000	
PRODUCTION	4-1/2"	0	to	9,884	11.60	I-80	BTC	1.99	1.05	2.78	

<sup>\*</sup>Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.12

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 3,795 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 5,922 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	ıtilized	
Option 2 LEAD	2,040'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,194'	Premium Lite II +0.25 pps	300	10%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,690'	50/50 Poz/G + 10% salt + 2% gel	1,100	10%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

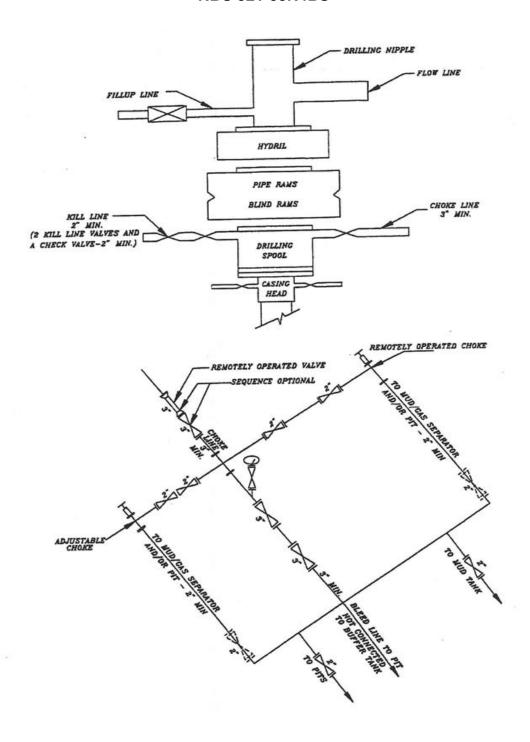
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

2	ENGINEER:	DATE:
	Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.	
	Surveys will be taken at 1,000' minimum intervals.	

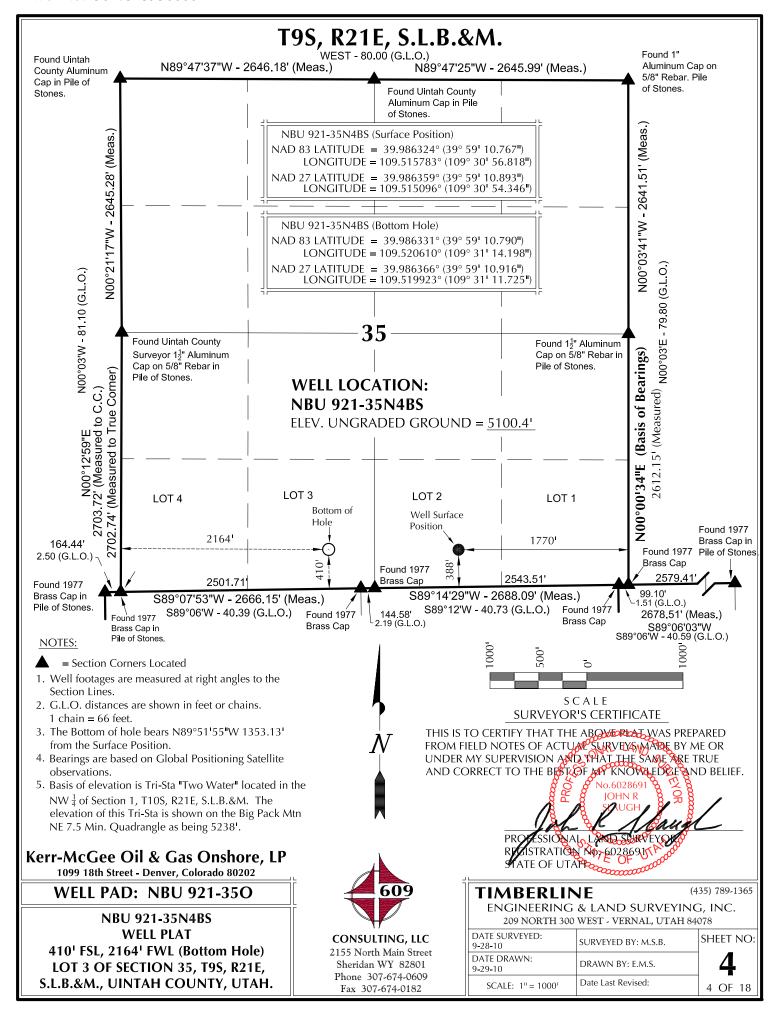
DRILLING ENGINEER:		DATE:
	John Huycke / Emile Goodwin	
DRILLING SUPERINTENDENT:		DATE:
	John Merkel / Lovel Young	

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-35N4BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



WELL NAME			SURFACE POS	ITION					В	OTTOM HOLE		
NIDIT		D83		NAD27				NAD	83	NAD27		
INDI	39°59'10.488	LONGITU 109°30'56.9			<b>ITUDE</b>  54.479	FOOTAGES 360' FSL	39°59'0		<b>LONGITUDE</b> 109°30'57.541"	<b>LATITUDE</b> 39°59'07.306"	<b>LONGITUDE</b> 109°30'55.068"	FOOTAGES 26' FSL
921-35O4CS	39.986247°	109.515820	99.98628	2° 109.515	5133°	1780' FEL	39.9853	328°	109.515983°	39.985363°	109.515297°	1826' FEL
NBU 921-3504BS	39°59'10.582 39.986273°	" 109°30'56.9 109.515808				370' FSL 1777' FEL	39°59'1		109°30'57.632" 109.516009°	39°59'10.368" 39.986213°	109°30'55.159" 109.515322°	336' FSL 1833' FEL
NBU	39°59'10.674	" 109°30'56.8	63" 39°59'10.	800" 109°30	54.390"	379' FSL	39°59'0	7.241"	109°31'14.354"	39°59'07.367"	109°31'11.880"	51' FSL
921-35N4CS NBU	39.986298° 39°59'10.767	109.515795 109°30'56.8				1773' FEL 388' FSL	39.9853 39°59'1		109.520654° 109°31'14.198"	39.985380° 39°59'10.916"	109.519967° 109°31'11.725"	2153' FWL 410' FSL
921-35N4BS	39.986324°	109.515783	° 39.98635	9° 109.515	5096°	1770' FEL	39.9863	331° -	109.520610°	39.986366°	109.519923°	2164' FWL
NBU 921-35O1CS	39°59'10.859 39.986350°	109°30'56.7 109.515 <i>77</i> 0				398' FSL 1766' FEL	39°59'1 39.987		109°30'57.570" 109.515992°	39°59'13.708" 39.987141°	109°30'55.097" 109.515305°	674' FSL 1828' FEL
NBU 921-3501BS	39°59'10.952 39.986375°	" 109°30'56.7 109.515758				407' FSL 1763' FEL	39°59'1 39.988		109°30'57.636" 109.516010°	39°59'17.512" 39.988198°	109°30'55.163" 109.515323°	1059' FSL 1833' FEL
CIGE 133	39°59'11.568		33" 39°59'11.	694" 109°30		469' FSL	33.300	105	109.510010	33.300130	109.515525	1033 TEL
	39.986547°	109.515676				1740' FEL	. D iti	1- D-11-	I I - I -			
WELL NAME	NORTH	EAST	WELL NAME	IVE COORD	EAS		NAME	NORT		WELL NAM	NORTH	EAST
NBU	-334.81	-46.1	NBU	-34.4	-56.4	<sub>41</sub> NBU		-346.		NBU	3.21	-1,353.1
921-35O4CS WELL NAME	NORTH		921-35O4BS WELL NAME	NORTH	EAS		5N4CS			921-35N4B	<u>s</u>	
NBU 921-35O1CS	275.6'	-61 9'	NBU 921-35O1BS	651.31	-70.2		l l					
N N	THE SE $\frac{1}{4}$ S.L.B.&M GLOBAL	OF SECTION . WHICH IS POSITIONIN ATIONS TO I	IS THE EAST I I 35, T9S, R2 TAKEN FROM IG SATELLITE BEAR NO0°00	1E, 1		N12°39'12"W - 202: (To Bottom Hole) AZ=347.34667°	1   5	NUB 09 22 HOLE) (To Bottom Hole) AZ=353.84389°		G WELL: CI	GE 133	
4-	AZ=3 \$75°43'	$-\frac{1}{2} \frac{1}{2} 1$	ole) Az=2 S58°38'	- 1353.13		$A \approx 20^{\circ} 24^{\circ} 29^{\circ} M$ $A \approx 20^{\circ} 4080^{\circ} M$	37.99' Z	NBU NBU 9 NBU 9 NBU 92	J 921-3501 921-35N4I 921-35N4C 21-35O4B	Az. to Exis Az. to Exis Az. to Exist. Az. to Exist. W	xist. W.H.=20.33 kist. W.H.=20.3683 t. W.H.=20.34167 W.H.=20.39194° V.H.=20.32278°	528° 76.4' 33° 86.4' 7° 96.5'

EXISTING GRADE @ CENTER OF WELL PAD = 5100.41 FINISHED GRADE ELEVATION = 5099.81 **CUT SLOPES** = 1.5:1FILL SLOPES = 1.5:1 **TOTAL WELL PAD AREA = 3.62 ACRES TOTAL DAMAGE AREA = 6.49 ACRES SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00** 

## Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## **WELL PAD - NBU 921-350**

**WELL PAD - LOCATION LAYOUT** NBU 921-35O4CS, NBU 921-35O4BS, NBU 921-35N4CS, NBU 921-35N4BS, NBU 921-35O1CS & NBU 921-35O1BS **LOCATED IN SECTION 35, T9S, R21E,** S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC

2155 North Main Street

Sheridan, WY 82801

Phone 307-674-0609 Fax 307-674-0182

## **WELL PAD QUANTITIES**

TOTAL CUT FOR WELL PAD = 13,694 C.Y. TOTAL FILL FOR WELL PAD = 2,423 C.Y. TOPSOIL @  $6^{\circ}$  DEPTH = 2,240 C.Y. EXCESS MATERIAL = 11,271 C.Y.

## **RESERVE PIT QUANTITIES**

**TOTAL CUT FOR RESERVE PIT** +/- 11,020 CY RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 42,290 BARRELS

## **TIMBERLINE**

ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

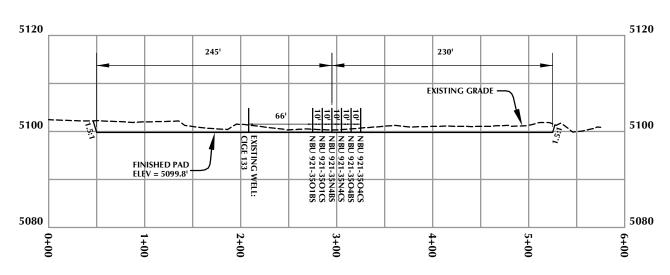
(435) 789-1365

**REVISED:** 

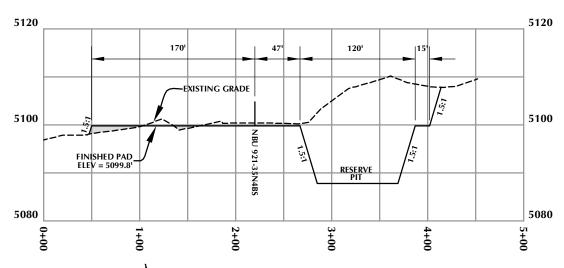
## WELL PAD LEGEND **EXISTING WELL LOCATION** 8 PROPOSED WELL LOCATION PROPOSED BOTTOM HOLE LOCATION EXISTING CONTOURS (2' INTERVAL) PROPOSED CONTOURS (2' INTERVAL) — PPL —— PROPOSED PIPELINE — EPL — EXISTING PIPELINE HORIZONTAL L 1'' = 60'2' CONTOURS

10/15/10 SHEET NO: JFE 12/9/10

Ö 8 OF 18



## **CROSS SECTION A-A'**



Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-350** 

**WELL PAD - CROSS SECTIONS** NBU 921-35O4CS, NBU 921-35O4BS, NBU 921-35N4CS, NBU 921-35N4BS, NBU 921-35O1CS & NBU 921-35O1BS LOCATED IN SECTION 35, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

## **CROSS SECTION B-B<sup>1</sup>**

**609** 

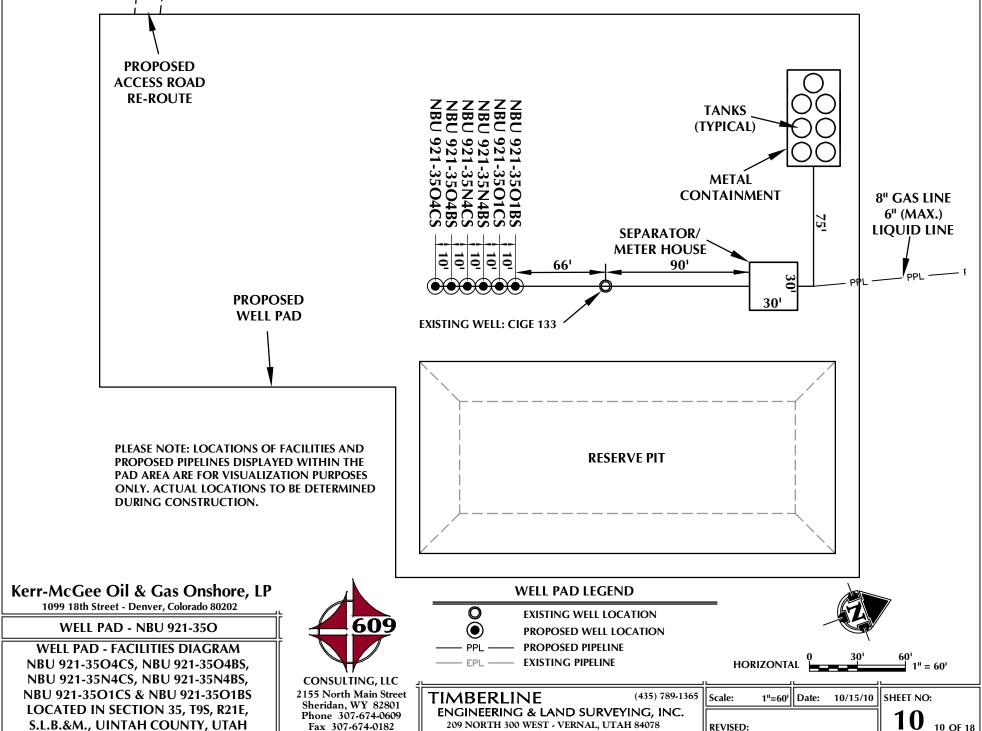
CONSULTING, LLC 2155 North Main Street Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182

**HORIZONTAL** VERTICAL

TIMBERLINE

(435) 789-1365 **ENGINEERING & LAND SURVEYING, INC.** 209 NORTH 300 WEST - VERNAL, UTAH 84078

Date: 10/15/10 Scale: SHEET NO: 1"=100" 9 OF 18 REVISED:



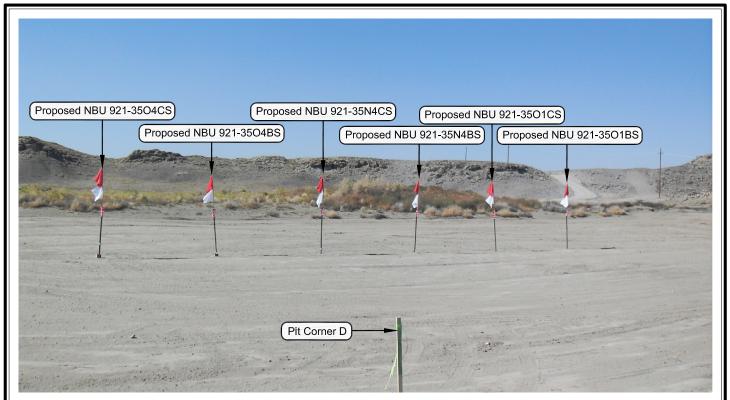


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

**CAMERA ANGLE: SOUTHEASTERLY** 

## Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## **WELL PAD - NBU 921-350**

LOCATION PHOTOS
NBU 921-3504CS, NBU 921-3504BS,
NBU 921-35N4CS, NBU 921-35N4BS,
NBU 921-3501CS & NBU 921-3501BS
LOCATED IN SECTION 35, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.



#### CONSULTING, LLC 2155 North Main Street Sheridan WY 82801 Phone 307-674-0609

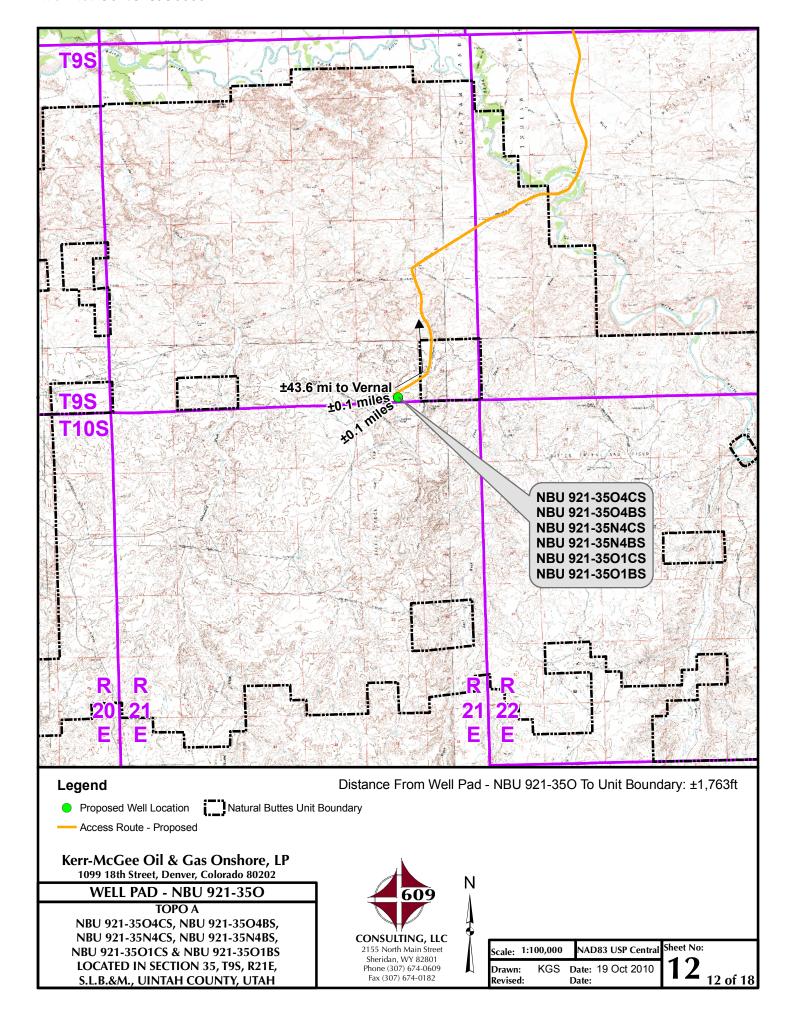
Fax 307-674-0182

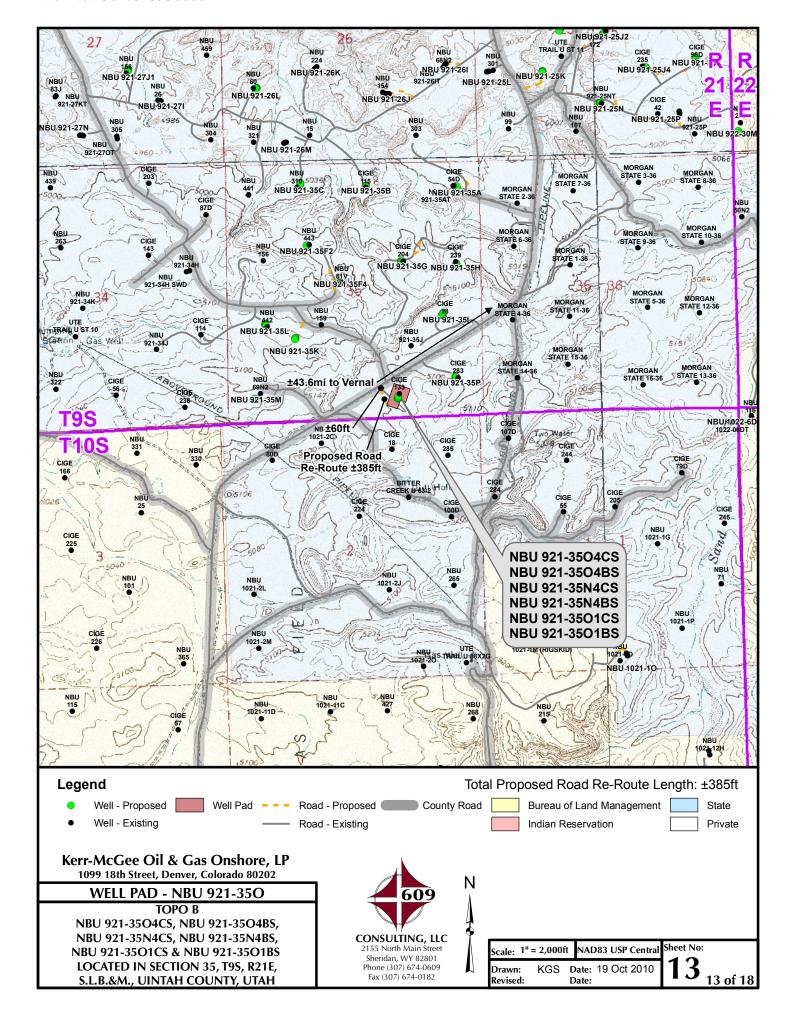
### TIMBERLINE

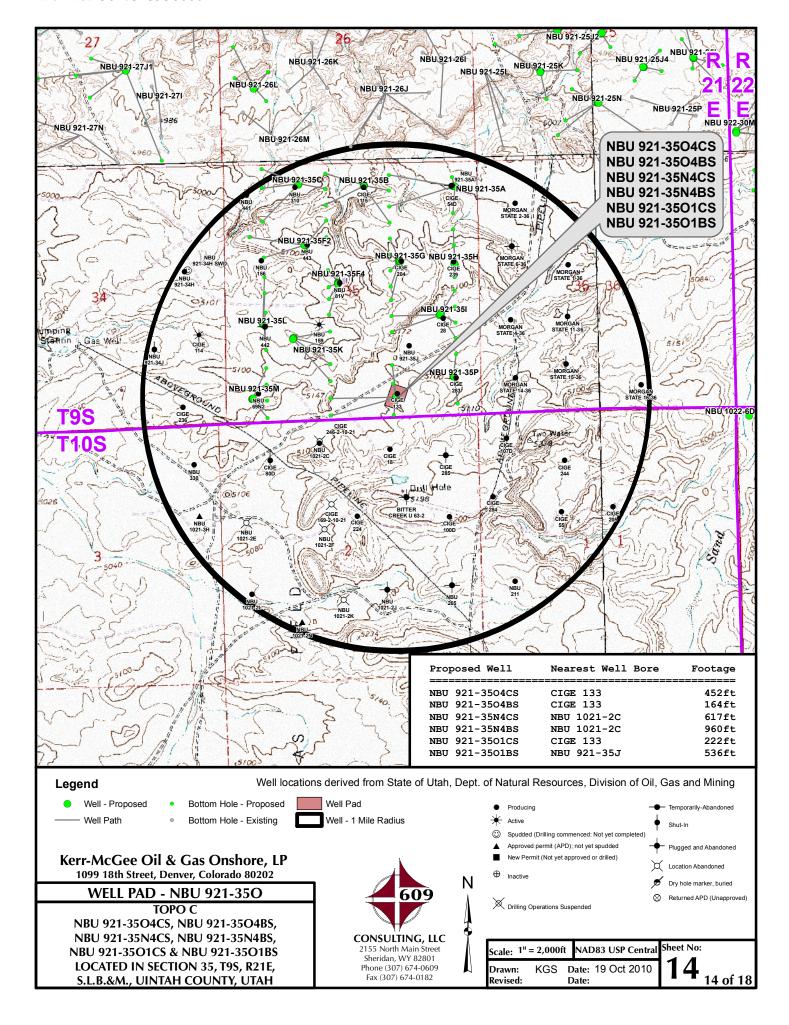
(435) 789-1365

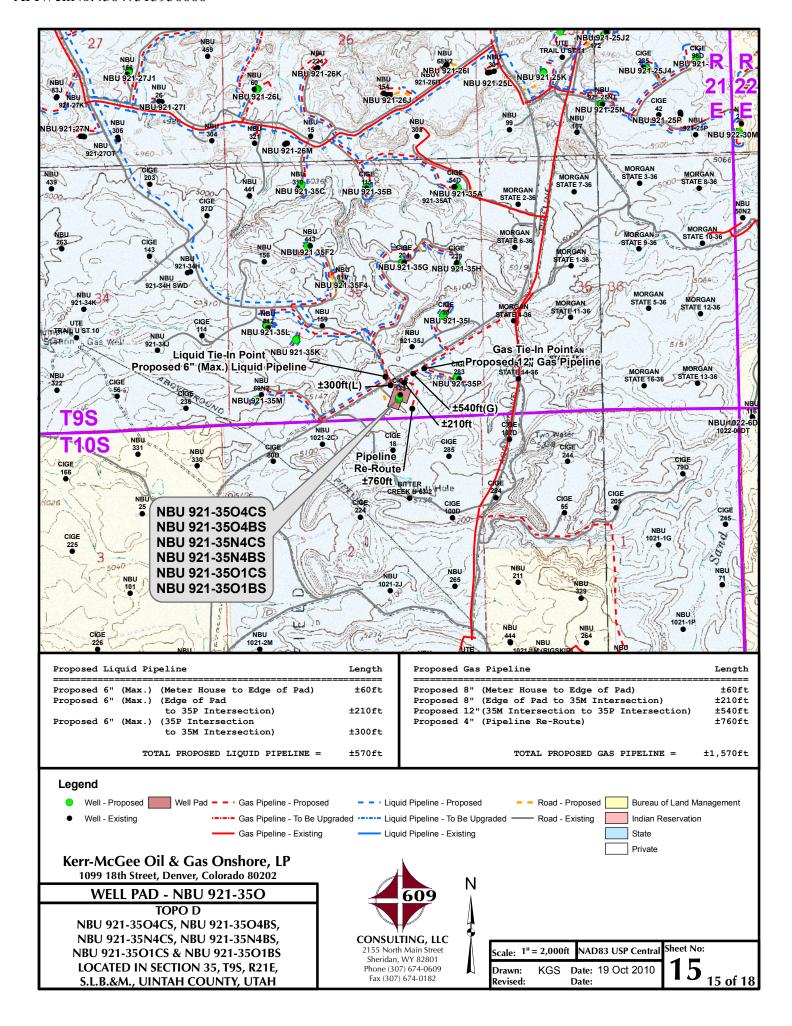
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

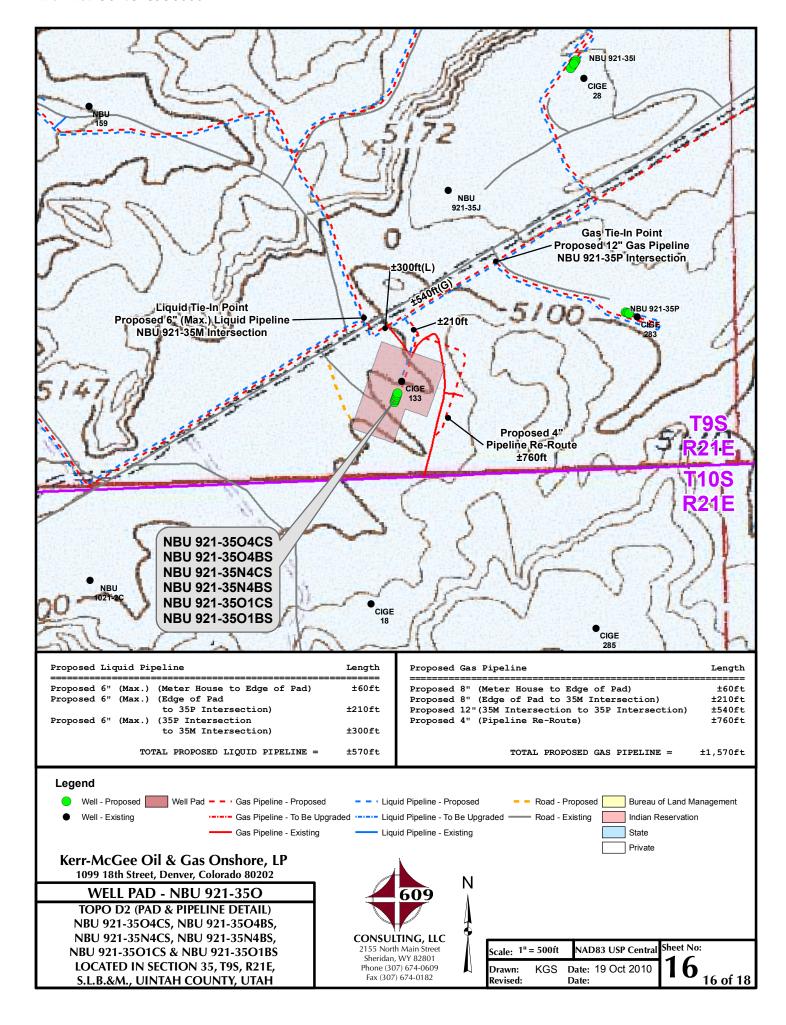
20011011111300	TIBOL : TEMPORE OF THE OF	
DATE PHOTOS TAKEN: 9-28-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO:
DATE DRAWN: 9-29-10	DRAWN BY: E.M.S.	11
Date Last Revised:		11 OF 18

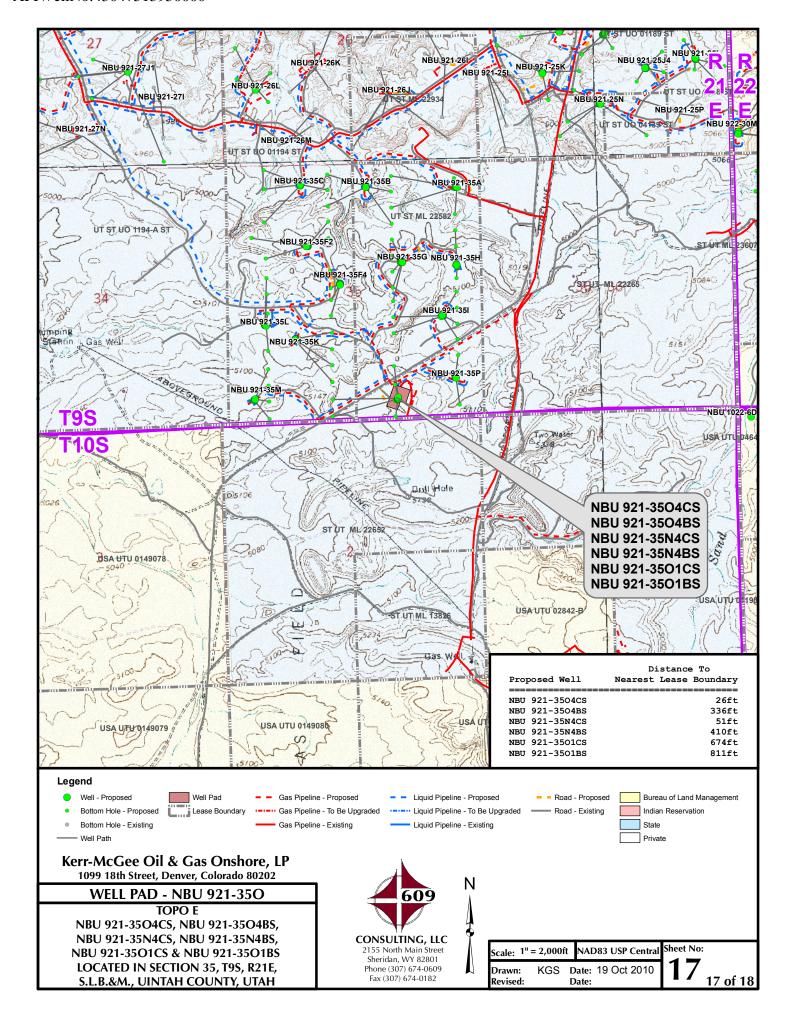












Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-350 WELLS – NBU 921-3504CS, NBU 921-3504BS, NBU 921-35N4CS, NBU 921-35N4BS, NBU 921-3501CS & NBU 921-3501BS Section 35, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 20.1 miles to a service road to the southeast. Exit left and proceed in a southeasterly direction along the service road approximately 60 feet to the proposed access road. Follow road flags in a southeasterly direction approximately 385 feet to the proposed well pad.

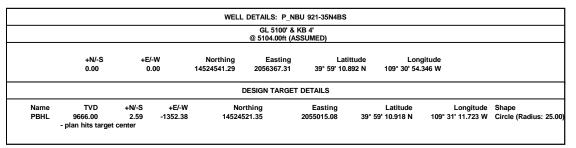
Total distance from Vernal, Utah to the proposed well location is approximately 43.7 miles in a southerly direction.

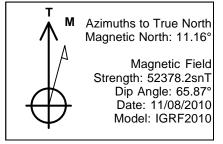


Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH\_NBU 921-350 PAD

Well: P\_NBU 921-35N4BS
Wellbore: P\_NBU 921-35N4BS
Design: PLAN #1 11-17-10 RHS









9666.00

9750

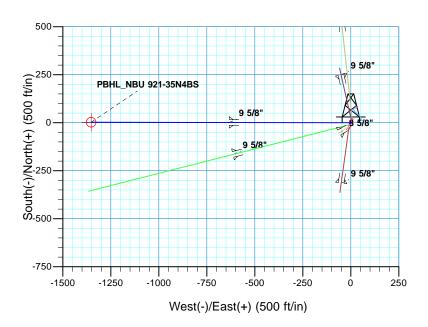
10500

-750

1352

TD at 9883.90

0 750 1500 2250 3000 Vertical Section at 270.11° (1500 ft/in)



SECTION DETAILS MD 0.00 300.00 +F/-W 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 20.00 270.11 20.00 270.11 1279.82 4046.10 0.33 2.26 -172.77 -1179.61 2.00 0.00 270.11 172.77 0.00 1179.61 4243.82 5243.82 9883.90 0.00 0.00 5025.92 9666.00 2.59 2.59 -1352.38 -1352.38 2.00 180.00 0.00 0.00 1352.38 1352.38 PBHL\_NBU 921-35N4BS FORMATION TOP DETAILS PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N TVDPath MDPath 1471.53 GREEN RIVER 4695.00 4912.16 WASATCH MESAVERDE Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 35 T9S R21E CASING DETAILS Plan: PLAN #1 11-17-10 RHS (P NBU 921-35N4BS/P NBU 921-35N4BS)

Created By: RobertScott

Date: 10:06, November 17 2010



# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-35O PAD P\_NBU 921-35N4BS

P\_NBU 921-35N4BS

Plan: PLAN #1 11-17-10 RHS

# **Standard Planning Report**

17 November, 2010





Site

## SDI Planning Report



EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N Project:

UINTAH\_NBU 921-350 PAD Site:

Well: P\_NBU 921-35N4BS Wellbore: P\_NBU 921-35N4BS Design: PLAN #1 11-17-10 RHS Local Co-ordinate Reference:

**Survey Calculation Method:** 

**TVD Reference:** 

MD Reference:

North Reference:

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

270.11

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

0.00

System Datum: Mean Sea Level

0.00

UINTAH\_NBU 921-350 PAD, SECTION 35 T9S R21E

Northing: 14,524,559.98 usft Site Position: Latitude: 39° 59' 11.076 N From: Lat/Long Easting: 2,056,374.00 usft Longitude: 109° 30' 54.256 W **Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in **Grid Convergence:** 0.95°

Well P\_NBU 921-35N4BS, 388 FSL 1770 FEL

**Well Position** +N/-S -18.57 ft 14,524,541.29 usft Latitude: 39° 59' 10.892 N Northing: +E/-W -7.00 ft 2,056,367.31 usft 109° 30' 54.346 W

Easting: Longitude: **Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 5.100.00 ft

P\_NBU 921-35N4BS Wellbore Declination Field Strength Magnetics **Model Name** Sample Date Dip Angle (°) (°) (nT) IGRF2010 11/08/2010 11.16 65.87 52,378

PLAN #1 11-17-10 RHS Design **Audit Notes:** PLAN 0.00 Version: Phase: Tie On Depth: +N/-S Vertical Section: Depth From (TVD) +E/-W Direction (ft) (ft) (ft) (°)

0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	270.11	1,279.82	0.33	-172.77	2.00	2.00	0.00	270.11	
4,243.82	20.00	270.11	4,046.10	2.26	-1,179.61	0.00	0.00	0.00	0.00	
5,243.82	0.00	0.00	5,025.92	2.59	-1,352.38	2.00	-2.00	0.00	180.00	
9,883.90	0.00	0.00	9,666.00	2.59	-1,352.38	0.00	0.00	0.00	0.00 F	PBHL_NBU 921-35N4



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

 Well:
 P\_NBU 921-35N4BS

 Wellbore:
 P\_NBU 921-35N4BS

 Design:
 PLAN #1 11-17-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

True

	anned Survey									
100.00	Depth			Depth			Section	Rate	Rate	Rate
400.00	100.00 200.00	0.00 0.00	0.00 0.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
600.00			270.11	399.98	0.00	-1.75	1.75	2.00	2.00	0.00
1,000.00	600.00 700.00 800.00	6.00 8.00 10.00	270.11 270.11 270.11	599.45 698.70 797.47	0.03 0.05 0.08	-15.69 -27.88 -43.52	15.69 27.88 43.52	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
1,400.00	1,000.00 1,100.00 1,200.00	14.00 16.00 18.00	270.11 270.11 270.11	993.06 1,089.64 1,185.27	0.16 0.21 0.27	-85.10 -110.98 -140.21	85.10 110.98 140.21	2.00 2.00 2.00	2.00 2.00 2.00	0.00 0.00 0.00
1,471.53				1 272 70	0.40	206.07	206.07	0.00	0.00	0.00
1,500.00   20.00   270.11   1,467.75   0.46   -241.17   241.17   0.00   0.00   0.00   0.00   1,500.00   20.00   270.11   1,561.72   0.53   -275.37   275.37   0.00   0.00   0.00   0.00   1,700.00   20.00   270.11   1,655.69   0.59   -309.58   309.58   0.00   0				,						
1,500.00	,		270.11	1,441.00	0.44	-231.43	231.43	0.00	0.00	0.00
2,000,00         20,00         270,11         1,937,60         0,79         -412,18         412,18         0.00         0.00         0.00           2,000,00         20,00         270,11         2,031,57         0.85         -446,38         0.00         0.00         0.00           2,200,00         20,00         270,11         2,125,54         0.92         -480,59         480,59         0.00         0.00         0.00           2,300,00         20,00         270,11         2,219,51         0.98         -514,79         514,79         0.00         0.00         0.00           2,400,00         20,00         270,11         2,407,45         1.12         -583,19         583,19         0.00         0.00         0.00           2,600,00         20,00         270,11         2,501,42         1.18         -617,39         0.00         0.00         0.00           2,645,32         20,00         270,11         2,594,00         1.21         -632,89         632,89         0.00         0.00         0.00           2,700,00         20,00         270,11         2,595,39         1.25         -651,59         651,60         0.00         0.00         0.00           2,800,00         20,00	1,500.00 1,600.00 1,700.00	20.00 20.00 20.00	270.11 270.11	1,561.72 1,655.69	0.53 0.59	-275.37 -309.58	275.37 309.58	0.00 0.00	0.00 0.00	0.00 0.00
2,500.00	2,000.00 2,100.00 2,200.00	20.00 20.00 20.00	270.11 270.11 270.11	1,937.60 2,031.57 2,125.54	0.79 0.85 0.92	-412.18 -446.38 -480.59	412.18 446.38 480.59	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
2,700.00         20.00         270.11         2,595.39         1.25         -651.59         651.60         0.00         0.00         0.00           2,800.00         20.00         270.11         2,689.35         1.31         -685.80         685.80         0.00         0.00         0.00           2,900.00         20.00         270.11         2,783.32         1.38         -720.00         720.00         0.00         0.00         0.00           3,000.00         20.00         270.11         2,877.29         1.44         -754.20         754.20         0.00         0.00         0.00         0.00           3,100.00         20.00         270.11         2,971.26         1.51         -788.40         788.40         0.00         0.00         0.00         0.00           3,200.00         20.00         270.11         3,065.23         1.57         -822.60         822.61         0.00         0.00         0.00           3,300.00         20.00         270.11         3,159.20         1.64         -856.81         856.81         0.00         0.00         0.00           3,400.00         20.00         270.11         3,253.17         1.70         -891.01         891.01         0.00         0.	2,500.00 2,600.00 2,645.32	20.00 20.00	270.11 270.11	2,407.45 2,501.42	1.12 1.18	-583.19 -617.39	583.19 617.39	0.00 0.00	0.00 0.00	0.00 0.00
2,900.00       20.00       270.11       2,783.32       1.38       -720.00       720.00       0.00       0.00       0.00         3,000.00       20.00       270.11       2,877.29       1.44       -754.20       754.20       0.00       0.00       0.00         3,100.00       20.00       270.11       2,971.26       1.51       -788.40       788.40       0.00       0.00       0.00         3,200.00       20.00       270.11       3,065.23       1.57       -822.60       822.61       0.00       0.00       0.00         3,300.00       20.00       270.11       3,159.20       1.64       -856.81       856.81       0.00       0.00       0.00         3,400.00       20.00       270.11       3,253.17       1.70       -891.01       891.01       0.00       0.00       0.00         3,500.00       20.00       270.11       3,347.14       1.77       -925.21       925.21       0.00       0.00       0.00         3,600.00       20.00       270.11       3,441.11       1.84       -959.41       959.41       0.00       0.00       0.00         3,800.00       20.00       270.11       3,629.05       1.97       -1,027.82 <td< td=""><td></td><td>20.00</td><td>270.11</td><td>2,595.39</td><td>1.25</td><td>-651.59</td><td>651.60</td><td>0.00</td><td>0.00</td><td>0.00</td></td<>		20.00	270.11	2,595.39	1.25	-651.59	651.60	0.00	0.00	0.00
3,400.00       20.00       270.11       3,253.17       1.70       -891.01       891.01       0.00       0.00       0.00         3,500.00       20.00       270.11       3,347.14       1.77       -925.21       925.21       0.00       0.00       0.00         3,600.00       20.00       270.11       3,441.11       1.84       -959.41       959.41       0.00       0.00       0.00         3,700.00       20.00       270.11       3,535.08       1.90       -993.61       993.62       0.00       0.00       0.00         3,800.00       20.00       270.11       3,629.05       1.97       -1,027.82       1,027.82       0.00       0.00       0.00         3,900.00       20.00       270.11       3,723.02       2.03       -1,062.02       1,062.02       0.00       0.00       0.00         4,000.00       20.00       270.11       3,816.99       2.10       -1,096.22       1,096.22       0.00       0.00       0.00         4,100.00       20.00       270.11       3,910.95       2.16       -1,130.42       1,130.42       0.00       0.00       0.00         4,200.00       20.00       270.11       4,004.92       2.23       -1,164.6	2,900.00 3,000.00 3,100.00	20.00 20.00 20.00	270.11 270.11 270.11	2,783.32 2,877.29 2,971.26	1.38 1.44 1.51	-720.00 -754.20 -788.40	720.00 754.20 788.40	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
3,900.00       20.00       270.11       3,723.02       2.03       -1,062.02       1,062.02       0.00       0.00       0.00         4,000.00       20.00       270.11       3,816.99       2.10       -1,096.22       1,096.22       0.00       0.00       0.00         4,100.00       20.00       270.11       3,910.95       2.16       -1,130.42       1,130.42       0.00       0.00       0.00         4,200.00       20.00       270.11       4,004.92       2.23       -1,164.62       1,164.63       0.00       0.00       0.00         4,243.82       20.00       270.11       4,046.10       2.26       -1,179.61       1,179.61       0.00       0.00       0.00	3,400.00 3,500.00 3,600.00	20.00 20.00 20.00	270.11 270.11 270.11	3,253.17 3,347.14 3,441.11	1.70 1.77 1.84	-891.01 -925.21 -959.41	891.01 925.21 959.41	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	3,900.00 4,000.00 4,100.00	20.00 20.00 20.00	270.11 270.11 270.11	3,723.02 3,816.99 3,910.95	2.03 2.10 2.16	-1,062.02 -1,096.22 -1,130.42	1,027.82 1,062.02 1,096.22 1,130.42	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Start Drop -2.00			270.11	4,046.10	2.26	-1,179.61	1,179.61	0.00	0.00	0.00



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-35O PAD

 Well:
 P\_NBU 921-35N4BS

 Wellbore:
 P\_NBU 921-35N4BS

 Design:
 PLAN #1 11-17-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

True

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	18.88	270.11	4,099.08	2.29	-1,198.31	1,198.31	2.00	-2.00	0.00
4,400.00	16.88	270.11	4,194.25	2.35	-1,229.00	1,229.00	2.00	-2.00	0.00
4,500.00	14.88	270.11	4,290.43	2.40	-1,256.36	1,256.36	2.00	-2.00	0.00
4,600.00	12.88	270.11	4,387.50	2.45	-1,280.34	1,280.34	2.00	-2.00	0.00
4,700.00	10.88	270.11	4,485.36	2.49	-1,300.92	1,300.92	2.00	-2.00	0.00
4,800.00	8.88	270.11	4,583.87	2.52	-1,318.07	1,318.07	2.00	-2.00	0.00
4,900.00	6.88	270.11	4,682.92	2.55	-1,331.77	1,331.77	2.00	-2.00	0.00
4,912.16	6.63	270.11	4,695.00	2.55	-1,333.20	1,333.21	2.00	-2.00	0.00
WASATCH			,		,	,			
5,000.00	4.88	270.11	4,782.39	2.57	-1,342.01	1,342.01	2.00	-2.00	0.00
5,100.00	2.88	270.11	4,882.16	2.58	-1,348.77	1,348.77	2.00	-2.00	0.00
5,200.00	0.88	270.11	4,982.10	2.59	-1,352.04	1,352.05	2.00	-2.00	0.00
5,243.82	0.00	0.00	5,025.92	2.59	-1,352.38	1,352.38	2.00	-2.00	0.00
	8 hold at 5243.82								
5,300.00	0.00	0.00	5,082.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,400.00	0.00	0.00	5,182.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,500.00	0.00	0.00	5,282.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,600.00	0.00	0.00	5,382.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,700.00	0.00	0.00	5,482.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,800.00	0.00	0.00	5,582.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
5,900.00	0.00	0.00	5,682.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,000.00	0.00	0.00	5,782.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,100.00	0.00 0.00	0.00	5,882.10	2.59	-1,352.38	1,352.38	0.00 0.00	0.00 0.00	0.00 0.00
6,200.00 6,300.00	0.00	0.00 0.00	5,982.10 6,082.10	2.59 2.59	-1,352.38 -1,352.38	1,352.38 1,352.38	0.00	0.00	0.00
6,400.00	0.00	0.00	6,182.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,500.00	0.00	0.00	6,282.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,600.00	0.00	0.00	6,382.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,700.00	0.00	0.00	6,482.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,800.00	0.00	0.00	6,582.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
6,900.00	0.00	0.00	6,682.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,000.00	0.00	0.00	6,782.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,100.00	0.00	0.00	6,882.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,200.00	0.00	0.00	6,982.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,300.00	0.00	0.00	7,082.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,400.00	0.00	0.00	7,182.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,500.00	0.00	0.00	7,282.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,600.00	0.00	0.00	7,382.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,633.90	0.00	0.00	7,416.00	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
MESAVERD			,		,	,			
7,700.00	0.00	0.00	7,482.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,800.00	0.00	0.00	7,582.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
7,900.00	0.00	0.00	7,682.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,000.00	0.00	0.00	7,782.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,100.00	0.00	0.00	7,882.10 7,982.10	2.59	-1,352.38	1,352.38 1,352.38	0.00	0.00	0.00
8,200.00	0.00	0.00		2.59	-1,352.38 1 352 38		0.00	0.00	0.00
8,300.00	0.00	0.00	8,082.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,400.00	0.00	0.00	8,182.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,500.00	0.00	0.00	8,282.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,600.00	0.00	0.00	8,382.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,700.00	0.00	0.00	8,482.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
8,800.00	0.00	0.00	8,582.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00



Company:

## SDI Planning Report



EDM5000-RobertS-Local Database:

US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

Well: P\_NBU 921-35N4BS Wellbore: P\_NBU 921-35N4BS Design: PLAN #1 11-17-10 RHS Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: **Survey Calculation Method:** 

Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

True

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,682.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,000.00		0.00	8,782.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,100.00	0.00	0.00	8,882.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,200.00	0.00	0.00	8,982.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,300.00	0.00	0.00	9,082.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,400.00	0.00	0.00	9,182.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,500.00	0.00	0.00	9,282.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,600.00	0.00	0.00	9,382.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,700.00	0.00	0.00	9,482.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,800.00	0.00	0.00	9,582.10	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
9,883.90	0.00	0.00	9,666.00	2.59	-1,352.38	1,352.38	0.00	0.00	0.00
TD at 9883	.90 - PBHL_NBU 9	921-35N4BS							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-35N4B: - plan hits target cen - Circle (radius 25.00	ter	0.00	9,666.00	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W

Casing Poin	nts				
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,645.32	2,544.00 9	9 5/8"	9.625	12.250

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,471.53	1,441.00	GREEN RIVER				
	4,912.16	4,695.00	WASATCH				
	7,633.90	7,416.00	MESAVERDE				

Plan Annotations					
Measure Depth	d Vertical Depth	Local Co	ordinates +E/-W		
(ft)	(ft)	(ft)	(ft)	Comment	
300.	00 300.00	0.00	0.00	Start Build 2.00	
1,300.	00 1,279.82	0.33	-172.77	Start 2943.82 hold at 1300.00 MD	
4,243.	82 4,046.10	2.26	-1,179.61	Start Drop -2.00	
5,243.	82 5,025.92	2.59	-1,352.38	Start 4640.08 hold at 5243.82 MD	
9,883	90 9,666.00	2.59	-1,352.38	TD at 9883.90	



# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-35O PAD P\_NBU 921-35N4BS

P\_NBU 921-35N4BS

Plan: PLAN #1 11-17-10 RHS

# **Standard Planning Report - Geographic**

17 November, 2010





## SDI Planning Report - Geographic



EDM5000-RobertS-Local Database:

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

UINTAH\_NBU 921-350 PAD Site:

Well: P\_NBU 921-35N4BS Wellbore: P\_NBU 921-35N4BS Design: PLAN #1 11-17-10 RHS **Local Co-ordinate Reference:** 

Survey Calculation Method:

TVD Reference:

MD Reference:

North Reference:

Well P\_NBU 921-35N4BS GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED) True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Universal Transverse Mercator (US Survey Feet) Map System:

NAD 1927 (NADCON CONUS) Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

Site UINTAH NBU 921-350 PAD, SECTION 35 T9S R21E

Northing: 14,524,559.98 usft Site Position: Latitude: 39° 59' 11.076 N 109° 30' 54.256 W 2,056,374.00 usft Lat/Long Easting: From: Longitude: 0.00 ft Slot Radius: 13.200 in 0.95° **Position Uncertainty: Grid Convergence:** 

P\_NBU 921-35N4BS, 388 FSL 1770 FEL Well

**Well Position** 39° 59' 10.892 N +N/-S 0.00 ft Northing: 14,524,541.29 usft Latitude:

+E/-W 0.00 ft 2,056,367.31 usft Longitude: 109° 30' 54.346 W Easting:

0.00 ft 5,100.00 ft **Position Uncertainty** Wellhead Elevation: **Ground Level:** 

Wellbore	P_NBU 921-35N4BS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/08/2010	11.16	65.87	52,378

PLAN #1 11-17-10 RHS Design **Audit Notes:** PLAN 0.00 Version: Phase: Tie On Depth: +N/-S Vertical Section: Depth From (TVD) +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 270.11

lan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	270.11	1,279.82	0.33	-172.77	2.00	2.00	0.00	270.11	
4,243.82	20.00	270.11	4,046.10	2.26	-1,179.61	0.00	0.00	0.00	0.00	
5,243.82	0.00	0.00	5,025.92	2.59	-1,352.38	2.00	-2.00	0.00	180.00	
9,883.90	0.00	0.00	9,666.00	2.59	-1,352.38	0.00	0.00	0.00	0.00 P	BHL_NBU 921-35N



# **SDI**Planning Report - Geographic



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

 Well:
 P\_NBU 921-35N4BS

 Wellbore:
 P\_NBU 921-35N4BS

 Design:
 PLAN #1 11-17-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

True

Planned Survey									
Measured			Vertical			Мар	Мар		
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
0.00		0.00	0.00	0.00	0.00	14,524,541.29	2,056,367.31	39° 59' 10.892 N	109° 30' 54.346 W
100.00		0.00	100.00	0.00	0.00	14,524,541.29	2,056,367.31	39° 59' 10.892 N	109° 30' 54.346 W
200.00		0.00	200.00	0.00	0.00	14,524,541.29	2,056,367.31	39° 59' 10.892 N	109° 30' 54.346 W
300.00		0.00	300.00	0.00	0.00	14,524,541.29	2,056,367.31	39° 59' 10.892 N	109° 30' 54.346 W
Start Bu						,- ,-	,,,,,,,,		
400.00	2.00	270.11	399.98	0.00	-1.75	14,524,541.27	2,056,365.56	39° 59' 10.892 N	109° 30' 54.368 W
500.00	4.00	270.11	499.84	0.01	-6.98	14,524,541.19	2,056,360.33	39° 59' 10.893 N	109° 30' 54.435 W
600.00	6.00	270.11	599.45	0.03	-15.69	14,524,541.06	2,056,351.61	39° 59' 10.893 N	109° 30' 54.547 W
700.00	8.00	270.11	698.70	0.05	-27.88	14,524,540.88	2,056,339.43	39° 59' 10.893 N	109° 30' 54.704 W
800.00	10.00	270.11	797.47	0.08	-43.52	14,524,540.65	2,056,323.79	39° 59' 10.893 N	109° 30' 54.905 W
900.00	12.00	270.11	895.62	0.12	-62.60	14,524,540.37	2,056,304.71	39° 59' 10.894 N	109° 30' 55.150 W
1,000.00	14.00	270.11	993.06	0.16	-85.10	14,524,540.04	2,056,282.22	39° 59' 10.894 N	109° 30' 55.439 W
1,100.00	16.00	270.11	1,089.64	0.21	-110.98	14,524,539.65	2,056,256.34	39° 59' 10.894 N	109° 30' 55.772 W
1,200.00		270.11	1,185.27	0.27	-140.21	14,524,539.22	2,056,227.11	39° 59' 10.895 N	109° 30' 56.147 W
1,300.00	20.00	270.11	1,279.82	0.33	-172.77	14,524,538.74	2,056,194.56	39° 59′ 10.896 N	109° 30' 56.566 W
Start 29	13.82 hold at 1								
1,400.00		270.11	1,373.78	0.40	-206.97	14,524,538.24	2,056,160.36	39° 59' 10.896 N	109° 30' 57.005 W
1,471.53	20.00	270.11	1,441.00	0.44	-231.43	14,524,537.88	2,056,135.90	39° 59' 10.897 N	109° 30' 57.319 W
GREEN									
1,500.00	20.00	270.11	1,467.75	0.46	-241.17	14,524,537.74	2,056,126.16	39° 59' 10.897 N	109° 30' 57.444 W
1,600.00	20.00	270.11	1,561.72	0.53	-275.37	14,524,537.23	2,056,091.96	39° 59' 10.898 N	109° 30' 57.884 W
1,700.00		270.11	1,655.69	0.59	-309.58	14,524,536.73	2,056,057.76	39° 59' 10.898 N	109° 30' 58.323 W
1,800.00		270.11	1,749.66	0.66	-343.78	14,524,536.22	2,056,023.57	39° 59' 10.899 N	109° 30' 58.763 W
1,900.00		270.11	1,843.63	0.72	-377.98	14,524,535.72	2,055,989.37	39° 59' 10.900 N	109° 30' 59.202 W
2,000.00		270.11	1,937.60	0.79	-412.18	14,524,535.21	2,055,955.17	39° 59' 10.900 N	109° 30' 59.642 W
2,100.00		270.11	2,031.57	0.85	-446.38	14,524,534.71	2,055,920.97	39° 59' 10.901 N	109° 31' 0.081 W
2,200.00		270.11	2,125.54	0.92	-480.59	14,524,534.21	2,055,886.77	39° 59' 10.901 N	109° 31' 0.521 W
2,300.00		270.11	2,219.51	0.98	-514.79	14,524,533.70	2,055,852.57	39° 59' 10.902 N	109° 31' 0.960 W
2,400.00		270.11	2,313.48	1.05	-548.99	14,524,533.20	2,055,818.38	39° 59' 10.903 N	109° 31' 1.400 W
2,500.00		270.11 270.11	2,407.45	1.12	-583.19 -617.39	14,524,532.69	2,055,784.18	39° 59' 10.903 N	109° 31' 1.839 W
2,600.00 2,645.32		270.11	2,501.42 2,544.00	1.18 1.21	-617.39 -632.89	14,524,532.19 14,524,531.96	2,055,749.98 2,055,734.48	39° 59' 10.904 N 39° 59' 10.904 N	109° 31' 2.279 W 109° 31' 2.478 W
	20.00	270.11	2,544.00	1.21	-032.69	14,524,551.90	2,055,754.46	39 39 10.904 N	109 31 2.476 W
<b>9 5/8"</b> 2,700.00	20.00	270.11	2,595.39	1.25	-651.59	14,524,531.68	2,055,715.78	39° 59' 10.905 N	109° 31' 2.718 W
2,800.00		270.11	2,689.35	1.25	-685.80	14,524,531.08	2,055,681.58	39° 59' 10.905 N	109° 31′ 2.718 W
2,900.00		270.11	2,069.33	1.38	-720.00	14,524,531.18	2,055,647.39	39° 59' 10.906 N	109° 31° 3.198 W
3,000.00		270.11	2,765.32	1.44	-720.00 -754.20	14,524,530.17	2,055,613.19	39° 59' 10.907 N	109° 31' 4.037 W
3,100.00		270.11	2,971.26	1.51	-788.40	14,524,529.67	2,055,578.99	39° 59' 10.907 N	109° 31' 4.476 W
3,200.00	20.00	270.11	3,065.23	1.57	-822.60	14,524,529.16	2,055,544.79	39° 59' 10.908 N	109° 31' 4.916 W
3,300.00	20.00	270.11	3,159.20	1.64	-856.81	14,524,528.66	2,055,510.59	39° 59' 10.908 N	109° 31' 5.355 W
3,400.00		270.11	3,253.17	1.70	-891.01	14,524,528.15	2,055,476.39	39° 59' 10.909 N	109° 31' 5.794 W
3,500.00		270.11	3,347.14	1.77	-925.21	14,524,527.65	2,055,442.20	39° 59' 10.910 N	109° 31' 6.234 W
3,600.00		270.11	3,441.11	1.84	-959.41	14,524,527.15	2,055,408.00	39° 59' 10.910 N	109° 31' 6.673 W
3,700.00		270.11	3,535.08	1.90	-993.61	14,524,526.64	2,055,373.80	39° 59′ 10.911 N	109° 31' 7.113 W
3,800.00		270.11	3,629.05	1.97	-1,027.82	14,524,526.14	2,055,339.60	39° 59' 10.912 N	109° 31' 7.552 W
3,900.00	20.00	270.11	3,723.02	2.03	-1,062.02	14,524,525.63	2,055,305.40	39° 59' 10.912 N	109° 31' 7.992 W
4,000.00	20.00	270.11	3,816.99	2.10	-1,096.22	14,524,525.13	2,055,271.20	39° 59' 10.913 N	109° 31' 8.431 W
4,100.00	20.00	270.11	3,910.95	2.16	-1,130.42	14,524,524.62	2,055,237.01	39° 59' 10.914 N	109° 31' 8.871 W
4,200.00		270.11	4,004.92	2.23	-1,164.62	14,524,524.12	2,055,202.81	39° 59′ 10.914 N	109° 31' 9.310 W
4,243.82	20.00	270.11	4,046.10	2.26	-1,179.61	14,524,523.90	2,055,187.82	39° 59' 10.914 N	109° 31' 9.503 W
Start Dro	•								
4,300.00	18.88	270.11	4,099.08	2.29	-1,198.31	14,524,523.62	2,055,169.13	39° 59' 10.915 N	109° 31' 9.743 W



# **SDI**Planning Report - Geographic



Database: EDM5000-RobertS-Local

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

 Well:
 P\_NBU 921-35N4BS

 Wellbore:
 P\_NBU 921-35N4BS

 Design:
 PLAN #1 11-17-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:
North Reference:

**Survey Calculation Method:** 

Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4' @ 5104.00ft (ASSUMED)

True

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,400.00	16.88	270.11	4,194.25	2.35	-1,229.00	14,524,523.17	2,055,138.44	39° 59' 10.915 N	109° 31' 10.137 W
4,500.00	14.88	270.11	4,290.43	2.40	-1,256.36	14,524,522.77	2,055,111.09	39° 59' 10.916 N	109° 31' 10.489 W
4,600.00	12.88	270.11	4,387.50	2.45	-1,280.34	14,524,522.41	2,055,087.11	39° 59' 10.916 N	109° 31' 10.797 W
4,700.00	10.88	270.11	4,485.36	2.49	-1,300.92	14,524,522.11	2,055,066.53	39° 59' 10.917 N	109° 31' 11.062 W
4,800.00	8.88	270.11	4,583.87	2.52	-1,318.07	14,524,521.86	2,055,049.38	39° 59' 10.917 N	109° 31' 11.282 W
4,900.00	6.88	270.11	4,682.92	2.55	-1,331.77	14,524,521.66	2,055,035.68	39° 59' 10.917 N	109° 31' 11.458 W
4,912.16	6.63	270.11	4,695.00	2.55	-1,333.20	14,524,521.63	2,055,034.25	39° 59' 10.917 N	109° 31' 11.476 W
WASATO									
5,000.00	4.88	270.11	4,782.39	2.57	-1,342.01	14,524,521.50	2,055,025.44	39° 59' 10.917 N	109° 31' 11.590 W
5,100.00	2.88	270.11	4,882.16	2.58	-1,348.77	14,524,521.41	2,055,018.68	39° 59' 10.918 N	109° 31' 11.676 W
5,200.00	0.88	270.11	4,982.10	2.59	-1,352.04	14,524,521.36	2,055,015.41	39° 59' 10.918 N	109° 31' 11.718 W
5,243.82	0.00	0.00	5,025.92	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
	10.08 hold at 5	243.82 MD							
5,300.00	0.00	0.00	5,082.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,400.00	0.00	0.00	5,182.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,500.00	0.00	0.00	5,282.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,600.00	0.00	0.00	5,382.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,700.00	0.00	0.00	5,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,800.00	0.00	0.00	5,582.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
5,900.00	0.00	0.00	5,682.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,000.00	0.00	0.00	5,782.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,100.00	0.00	0.00	5,882.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,200.00	0.00	0.00	5,982.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,300.00	0.00	0.00	6,082.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,400.00	0.00	0.00	6,182.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,500.00	0.00	0.00	6,282.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,600.00	0.00	0.00	6,382.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,700.00	0.00	0.00	6,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,800.00	0.00	0.00	6,582.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
6,900.00	0.00	0.00	6,682.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,000.00	0.00	0.00	6,782.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,100.00	0.00	0.00	6,882.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,200.00	0.00	0.00	6,982.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W 109° 31' 11.723 W
7,300.00	0.00	0.00 0.00	7,082.10	2.59	-1,352.38	14,524,521.35	2,055,015.07 2,055,015.07	39° 59' 10.918 N	109 31 11.723 W
7,400.00 7,500.00	0.00	0.00	7,182.10 7,282.10	2.59 2.59	-1,352.38 -1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N 39° 59' 10.918 N	109° 31' 11.723 W
7,600.00	0.00	0.00	7,282.10	2.59	-1,352.38	14,524,521.35 14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,633.90	0.00	0.00	7,362.10 7,416.00	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
MESAVE		0.00	7,410.00	2.55	-1,332.30	14,524,521.55	2,000,010.07	39 39 10.91014	109 31 11.723 W
7,700.00	0.00	0.00	7,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,800.00	0.00	0.00	7,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
7,900.00	0.00	0.00	7,582.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,000.00	0.00	0.00	7,782.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,100.00	0.00	0.00	7,882.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,200.00	0.00	0.00	7,982.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,300.00	0.00	0.00	8,082.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,400.00	0.00	0.00	8,182.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,500.00	0.00	0.00	8,282.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,600.00	0.00	0.00	8,382.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,700.00	0.00	0.00	8,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,800.00	0.00	0.00	8,582.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
8,900.00	0.00	0.00	8,682.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
0,300.00	0.00	0.00	0,002.10	2.03	-1,002.00	17,027,021.00	2,000,010.07	VI 016.01 60 60	100 01 11.720 W



Company:

# **SDI**Planning Report - Geographic



Database: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

 Well:
 P\_NBU 921-35N4BS

 Wellbore:
 P\_NBU 921-35N4BS

 Design:
 PLAN #1 11-17-10 RHS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well P\_NBU 921-35N4BS

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

GL 5100' & KB 4'

@ 5104.00ft (ASSUMED)

True

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,000.00	0.00	0.00	8,782.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,100.00	0.00	0.00	8,882.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,200.00	0.00	0.00	8,982.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,300.00	0.00	0.00	9,082.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,400.00	0.00	0.00	9,182.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,500.00	0.00	0.00	9,282.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,600.00	0.00	0.00	9,382.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,700.00	0.00	0.00	9,482.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,800.00	0.00	0.00	9,582.10	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
9,883.90	0.00	0.00	9,666.00	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W
TD at 988	33.90 - PBHL_	NBU 921-35N	N4BS						

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 921-35N4B: - plan hits target cent - Circle (radius 25.00		0.00	9,666.00	2.59	-1,352.38	14,524,521.35	2,055,015.07	39° 59' 10.918 N	109° 31' 11.723 W

Casing Points						
	Measured	Vertical		Casing	Hole	
	Depth	Depth		Diameter	Diameter	
	(ft)	(ft)	Name	(in)	(in)	
	2,645.32	2,544.00 9 5/8"		9.625	12.250	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,471.53 4,912.16 7,633.90	4,695.00	GREEN RIVER WASATCH MESAVERDE				

Plan Annotations				
Measured	Vertical	Local Coord	dinates	Comment
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	0.33	-172.77	Start 2943.82 hold at 1300.00 MD
4,243.82	4,046.10	2.26	-1,179.61	Start Drop -2.00
5,243.82	5,025.92	2.59	-1,352.38	Start 4640.08 hold at 5243.82 MD
9,883.90	9,666.00	2.59	-1,352.38	TD at 9883.90

#### **NBU 921-35N4BS**

Surface: 388' FSL 1,770' FEL (SW/4SE/4) Lot 2 BHL: 410' FSL 2,164' FWL (SE/4SW/4) Lot 3 Mineral Lease: UO 1194 ST

#### NBU 921-35N4CS

Surface: 379' FSL 1,773' FEL (SW/4SE/4) Lot 2 BHL: 51' FSL 2,153' FWL (SE/4SW/4) Lot 3 Mineral Lease: UO 1194 ST

## **NBU 921-3501BS**

Surface: 407' FSL 1,763' FEL (SW/4SE/4) Lot 2 BHL: 1,059' FSL 1,833' FEL (SW/4SE/4) Lot 2 Mineral Lease: ML 22582

### **NBU 921-3501CS**

Surface: 398' FSL 1,766' FEL (SW/4SE/4) Lot 2 BHL: 674' FSL 1,828' FEL (SW/4SE/4) Lot 2 Mineral Lease: ML 22582

## **NBU 921-3504BS**

Surface: 370' FSL 1,777' FEL (SW/4SE/4) Lot 2 BHL: 336' FSL 1,833' FEL (SW/4SE/4) Lot 2 Mineral Lease: ML 22582

### **NBU 921-3504CS**

Surface: 360' FSL 1,780' FEL (SW/4SE/4) Lot 2 BHL: 26' FSL 1,826' FEL (SW/4SE/4) Lot 2 Mineral Lease: ML 22582

Pad: NBU 921-350 Section 35 T9S R21E

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

## MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

## A. <u>Existing Roads</u>:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and

utility corridors exceed 50', unless otherwise approved.

## B. Planned Access Roads:

Approximately  $\pm 385$ ' (0.07 miles) of road re-route is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

## C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the CIGE 133. This well location is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of November 11, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM. Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,570$ ' and the individual segments are broken up as follows:

- $\pm 60$ ' (0.01 miles) –New 8" buried gas pipeline from the meter to the edge of the pad.
- $\pm 210^{\circ}$  (0.04 miles) –New 8" buried gas pipeline from the edge of pad to the NBU 921-35M pad intersection.
- $\pm 540^{\circ}$  (0.1 miles) –New 12" buried gas pipeline from the NBU 921-35M pad intersection to the NBU 921-35P pad intersection.
- ±760' (0.1 miles) –Re-route 4" buried gas pipeline around the well pad.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 570$ ' and the individual segments are broken up as follows:

±60' (0.01 miles) –New 6" buried liquid pipeline from the meter to the edge of the pad. ±210' (0.04 miles) –New 6" buried liquid pipeline from the edge of pad to the NBU 921-35P pad intersection.

 $\pm 300$ ' (0.06 miles) –New 6" buried liquid pipeline from the NBU 921-35P pad intersection to the NBU 921-35M pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

## D. <u>Location and Type of Water Supply:</u>

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### **E.** Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

# F. <u>Methods of Handling Waste Materials</u>:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E

NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner

Surface Use Plan of Operations Page 5

will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

#### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

## G. Ancillary Facilities:

None are anticipated.

## H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

# I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

Surface Use Plan of Operations Page 7

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

#### **Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

#### Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-

Surface Use Plan of Operations Page 8

vegetation. The site specific seed mix will be provided by SITLA.

# J. <u>Surface/Mineral Ownership</u>:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

# K. Other Information:

None

## M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

November 19, 2010

Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

October 27, 2010

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-35N4BS

T9S-R21E

Section 35: SWSE (Surf), SESW (Bottom)

Surface: 388' FSL, 1770' FEL Bottom Hole: 410' FSL, 2164' FEL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-35N4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

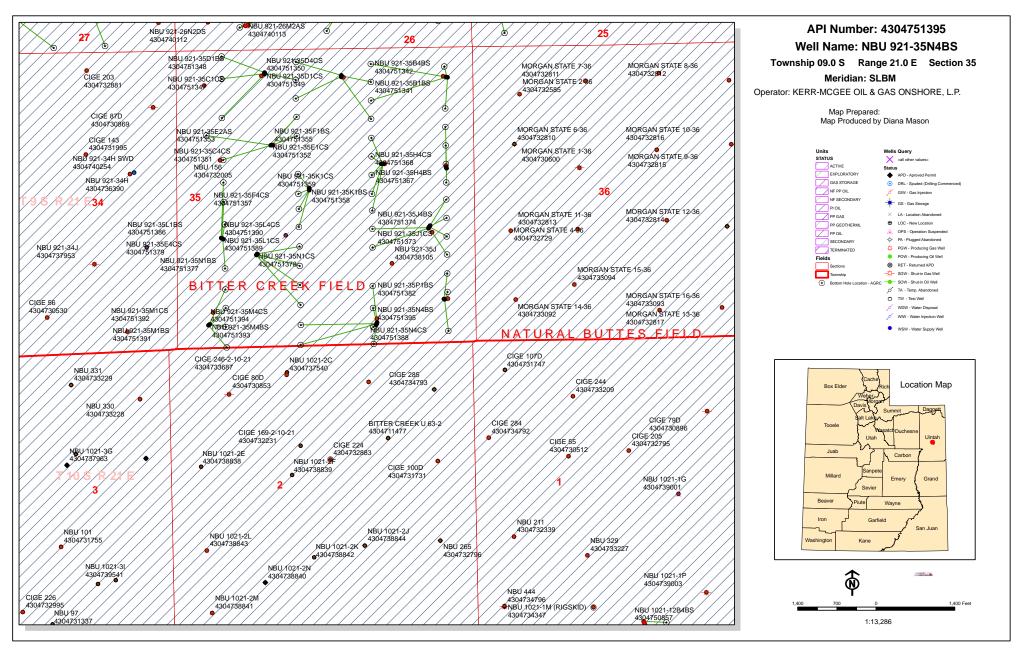
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman

Joe Matines



# **United States Department of the Interior**

#### BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

December 1, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### NBU 921-35F2 Pad

43-047-51355 NBU 921-35F1BS Sec 35 T09S R21E 1684 FNL 1709 FWL BHL Sec 35 T09S R21E 1531 FNL 2146 FWL

#### NBU 921-35F4 PAD

43-047-51356 NBU 921-35F4BS Sec 35 T09S R21E 2473 FNL 2358 FWL BHL Sec 35 T09S R21E 2210 FNL 2158 FWL

BRL Sec 33 1093 RZIE ZZIO FNL ZIJO FW

43-047-51357 NBU 921-35F4CS Sec 35 T09S R21E 2483 FNL 2358 FWL BHL Sec 35 T09S R21E 2567 FNL 2159 FWL

43-047-51358 NBU 921-35K1BS Sec 35 T09S R21E 2493 FNL 2358 FWL

BHL Sec 35 T09S R21E 2484 FSL 2161 FWL

43-047-51359 NBU 921-35K1CS Sec 35 T09S R21E 2503 FNL 2357 FWL BHL Sec 35 T09S R21E 2163 FSL 2155 FWL

#### NBU 921-35G Pad

43-047-51360 NBU 921-35G1BS Sec 35 T09S R21E 2053 FNL 1633 FEL

BHL Sec 35 T09S R21E 1583 FNL 1819 FEL

BHL Sec 35 T09S R21E 1916 FNL 1820 FEL

43-047-51362 NBU 921-35G4BS Sec 35 T09S R21E 2053 FNL 1643 FEL

BHL Sec 35 T09S R21E 2250 FNL 1822 FEL

API #	WE	LL NAME		LOCATION						
(Proposed PZ	WASA	ATCH-MESA VERDI	Ε)							
43-047-51363	NBU	921-35G4CS BHL								
43-047-51364	NBU	921-35J1BS BHL	Sec Sec	35 35	T09S T09S	R21E R21E	2053 2419	FNL FSL	1613 1824	FEL FEL
NBU 921-35H PAI	)									
43-047-51365	NBU	921-35H1BS BHL								
43-047-51366	NBU	921-35H1CS BHL								
43-047-51367	NBU	921-35H4BS BHL								
43-047-51368  NBU 921-35I PAD		921-35H4CS BHL	Sec Sec	35 35	T09S T09S	R21E R21E	2152 2407	FNL FNL	0483 0495	FEL FEL
NBU 921-351 PAD										
43-047-51369	NBU	921-35I1BS BHL								
43-047-51370	NBU	921-35I1CS BHL								
43-047-51371	NBU	921-35I4BS BHL								
43-047-51372	NBU	921-35I4CS BHL								
43-047-51373	NBU	921-35J1CS BHL				R21E R21E				
		921-35J4BS BHL				R21E R21E				
NBU 921-35K PAI	J									
43-047-51375	NBU	921-35K4BS BHL				R21E R21E		_		
43-047-51376	NBU	921-35K4CS BHL				R21E R21E				
43-047-51377	NBU	921-35N1BS BHL				R21E R21E				
43-047-51378	NBU	921-35N1CS BHL				R21E R21E				

NBU 921-35L PAI	)									
43-047-51379	NBU	921-35E4CS BHL				R21E R21E				
43-047-51386	NBU	921-35L1BS BHL				R21E R21E				
43-047-51389	NBU	921-35L1CS BHL				R21E R21E				
43-047-51390	NBU	921-35L4CS BHL								
NBU 921-35P PAI	)									
43-047-51380	NBU	921-35P4CS BHL				R21E R21E				
43-047-51381	NBU	921-35P1CS BHL				R21E R21E		_		
		921-35P1BS BHL								
NBU 921-350 PAI	ס									
43-047-51383	NBU	921-3504CS BHL				R21E R21E				
43-047-51384	NBU	921-3504BS BHL				R21E R21E				
43-047-51385	NBU	921-3501CS BHL				R21E R21E		_		
43-047-51387	NBU	921-3501BS BHL				R21E R21E				
43-047-51388	NBU	921-35N4CS BHL				R21E R21E				
43-047-51395	NBU	921-35N4BS BHL				R21E R21E				
NBU 921-35M PAD										
43-047-51391	NBU	921-35M1BS BHL				R21E R21E				
43-047-51392	NBU	921-35M1CS BHL				R21E R21E				

API # WELL NAME LOCATION

Page 4

API # WELL NAME LOCATION

43-047-51393 NBU 921-35M4BS Sec 35 T09S R21E 0478 FSL 0543 FWL BHL Sec 35 T09S R21E 0423 FSL 0831 FWL 43-047-51394 NBU 921-35M4CS Sec 35 T09S R21E 0464 FSL 0517 FWL BHL Sec 35 T09S R21E 0055 FSL 0834 FWL

This office has no objection to permitting the wells at this time.



bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:12-1-10

From: Jim Davis

To: Bonner, Ed; Hill, Brad; Mason, Diana

CC: Curry, Kristine; Danielle Piernot; Garrison, LaVonne; Hayden, Martha;...

**Date:** 12/22/2010 5:49 AM

**Subject:** Kerr McGee APD approvals in 9S 21E Sec 35 **Attachments:** KMG approvals 921-35 on 12.22.2010.xls

The following wells have been approved by SITLA under the following arch and paleo stipulations. This is a long list, so I'm attaching a spreadsheet with the same information.

A note on arch and paleo stipulations: Wells that have an arch note "non-significant site" do not need to be avoided or mitigated. Only those that say "needs to be avoided".

The paleo reports make recommendations for "spot paleo monitoring" or "full paleo monitoring". It is my understanding that Kerr McGee is taking these stipulations and doing full monitoring in either case, in an abundance of caution.

-Jim Davis

Well Name	API	Paleo Stip	ulations	Arch Stipu	ulations				
Kerr-McGee's N	BU 921	1-35A1BS	API	#4304751339	IPC	10-98	Spot Paleo	Monitoring	J
(U-07-MQ-1437	b,i,p,s)						-		
Kerr-McGee's N	BU 921	1-35A4CS	API	#4304751340	IPC	10-98	Spot Paleo	Monitoring	J
(U-07-MQ-1437	b,i,p,s)						•	_	
Kerr-McGee's N		1-35B1BS	API	#4304751341	IPC	10-98	Spot Paleo	Monitoring	J
(U-07-MQ-1437									
Kerr-McGee's N		1-35B4BS	API	#4304751342	IPC	10-98	Spot Paleo	Monitoring	J
(U-07-MQ-1437									
Kerr-McGee's N				#4304751343			Spot Paleo		
(U-07-MQ-1437	b,i,p,s;	eligible site	42Un646	1, just south of					
Kerr-McGee's N				#4304751344			Spot Paleo		
(U-07-MQ-1437									
Kerr-McGee's N	BU 921	1-35C1BS	API	#4304751345	IPC	10-98	Spot Paleo	Monitoring	J
(U-07-MQ-1437	b,i,p,s;	eligible site	42Un646	1, just south of					
Kerr-McGee's N				#4304751346			Spot Paleo		
(U-07-MQ-1437	b,i,p,s;	eligible site	42Un646	1, just south of					
Kerr-McGee's N	BU 921	1-35C1CS	API	#4304751347	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35D1BS	API	#4304751348	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s	)								
Kerr-McGee's N	BU 921	1-35D1CS	API	#4304751349	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35D4CS	API	#4304751350	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35C4CS	API	#4304751351	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35E1CS	API	#4304751352	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35E2AS	API	#4304751353	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35F1BS	API	#4304751355	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35F4BS	API	#4304751356	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s									
Kerr-McGee's N		1-35F4CS	API	#4304751357	IPC	10-97	Full Paleo I	Monitoring	(U-07-
MQ-1437b,i,p,s					15.0				// L 0=
Kerr-McGee's N	BU 921	1-35K1BS	API	#4304751358	IPC	10-97	Full Paleo I	Monitoring	(U-07-

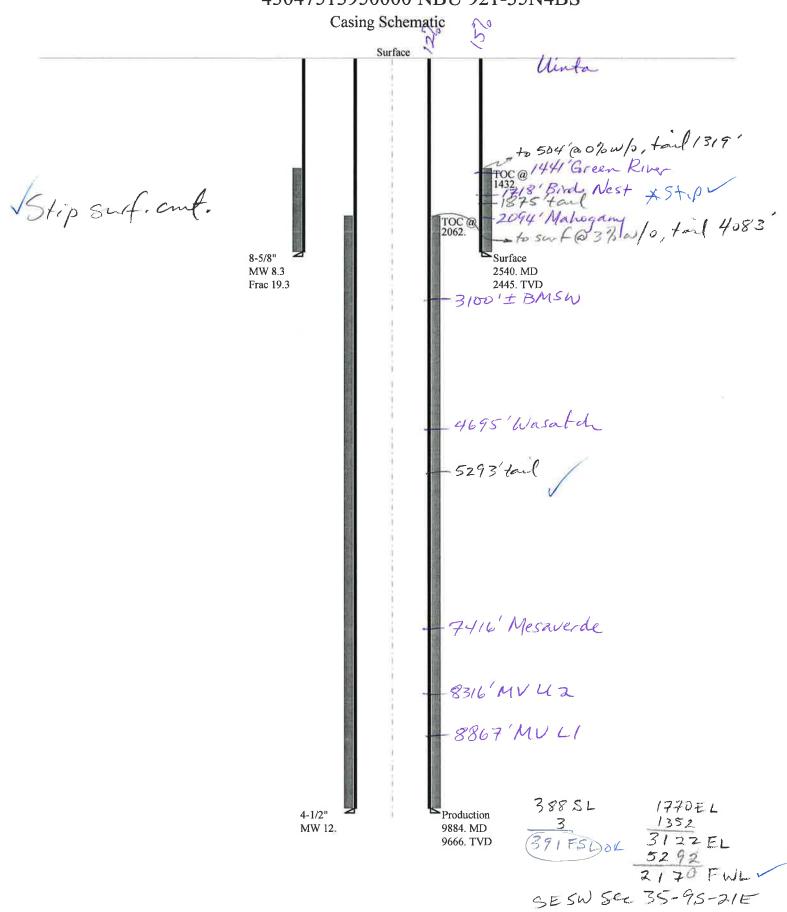
110 (107)		
MQ-1437b,i,p,s)	. =	
Kerr-McGee's NBU 921-35K1CS	API #4304751359	IPC 10-97 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35G1BS	API #4304751360	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un2395, adjacer	
Kerr-McGee's NBU 921-35G1CS	API #4304751361	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un2395, adiacer	
Kerr-McGee's NBU 921-35G4BS	API #4304751362	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
	API #4304751363	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-35J1S API #4		1-98 Spot Paleo Monitoring (U-07-
MQ-1437b,i,p,s; 1 non-significant site, 4		
Kerr-McGee's NBU 921-35H1BS	API #4304751365	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	. =	
Kerr-McGee's NBU 921-35H1CS	API #4304751366	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35H4BS	API #4304751367	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35H4CS	API #4304751368	IPC 10-98 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35I1BS API #4	304751369 IPC 10	-100 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)		· ·
Kerr-McGee's NBU 921-35I1CS	API #4304751370	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		g
Kerr-McGee's NBU 921-35I4BS API #4	304751371 IPC 10	-100 Full Paleo Monitoring (U-07-
MQ-1437b,i,p,s)	004701071 11 0 10	100 Tuli Tulco Monitoring (6 07
Kerr-McGee's NBU 921-35I4CS	API #4304751372	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	AI 1#4304/313/2	ii C 10-1001 dii i aleo Monitoning
Kerr-McGee's NBU 921-35J1CS	API #4304751373	IPC 10-98 Spot Paleo Monitoring
	AFT#4304731373	ir C 10-90 Spot Faleo Monitoring
(U-07-MQ-1437b,i,p,s)	A DI #4004754074	IDC 40 400 Full Dalas Manitarina
Kerr-McGee's NBU 921-35J4BS	API #4304751374	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	A DI #400 475 4075	IDO 40 00 0 4 D 4 M 11 1
Kerr-McGee's NBU 921-35K4BS	API #4304751375	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35K4CS	API #4304751376	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35N1BS	API #4304751377	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35N1CS	API #4304751378	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35E4CS	API #4304751379	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		·
Kerr-McGee's NBU 921-35P4CS	API #4304751380	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		g
Kerr-McGee's NBU 921-35P1CS	API #4304751381	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	74 1 11 100 170 100 1	in a to too t and also Monitoring
Kerr-McGee's NBU 921-35P1BS	API #4304751382	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s)	ATT#4504751502	ii C 10-1001 dii i aleo Monitoning
	A DI #4204754202	IDC 10 100 Full Polos Manitorina
Kerr-McGee's NBU 921-3504CS	API #4304751383	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-3504BS	API #4304751384	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-3501CS	API #4304751385	IPC 10-100 Full Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant		
Kerr-McGee's NBU 921-35L1BS	API #4304751386	IPC 10-99 Spot Paleo Monitoring

(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35O1BS	API #4304751387	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un1836, adjacer	nt to pipeline)
Kerr-McGee's NBU 921-35N4CS	API #4304751388	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un1836, adjacer	nt to pipeline)
Kerr-McGee's NBU 921-35L1CS	API #4304751389	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35L4CS	API #4304751390	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1BS	API #4304751391	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M1CS	API #4304751392	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4BS	API #4304751393	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35M4CS	API #4304751394	IPC 10-99 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s)		
Kerr-McGee's NBU 921-35N4BS	API #4304751395	IPC 10-100 Spot Paleo Monitoring
(U-07-MQ-1437b,i,p,s; 1 non-significant	site, 42Un1836, adjacer	nt to pipeline)

# BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-35N4BS 43047513950000

Well Name		KERR-MCGEE OIL & GAS ONSHORE, L.				- L D NDLLO	04 05814	IDD 4204754204
String		Surf	TE	Prod	i	E, L.P. NBU 9	121-35IN4	1
Casing Size(")		8.625	H	4.500	+	<u></u>	=  -	
Setting Depth (TVD)		2445	H	9666	-	<u>.                                    </u>	≓⊬	
Previous Shoe Setting Dept	th (TVD)		H		+		=	
Max Mud Weight (ppg)	(1 ( 1 ( ) )	40	H	2445	-	<u></u>	=  -	
BOPE Proposed (psi)		8.3	H	12.0	+	<u></u>	╬	
Casing Internal Yield (psi)		500	H	5000	-		=  -	
Operators Max Anticipated Pressure (psi)		3390	H	7780	4		=  -	
Operators Max Anticipate	d Pressure (psi)	5896	1	11.7	Ц	<u></u>	<u> </u>	
Calculations	Sui	rf String					8.625	"
Max BHP (psi)		.052*Sett	ting	g Depth*N	ΛV	V= 1059		
								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	x BHP-(0.12	*Se	etting De	pth	)= 766		NO air drill
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22	*Se	etting De	pth	)= 521		NO
								*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Γ	Depth - Previo	ous	Shoe De	pth	)= 530		NO Reasonable depth in area
Required Casing/BOPE To	est Pressure=				Т	2373		psi
*Max Pressure Allowed @	Previous Casing Shoe=					40		psi *Assumes 1psi/ft frac gradient
Calculations	Pro	d String					4.500	"
Max BHP (psi)		.052*Sett	ting	g Depth*N	ΛV	V= 6032		
2510210111					_			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		ax BHP-(0.12	_		_	/		YES
MASP (Gas/Mud) (psi)	Ma	x BHP-(0.22	*So	etting De	pth	)= 3905		YES OK
				~ ~	_			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe		Depth - Previo	ous	Shoe De	pth	)=  4443		NO Reasonable
Required Casing/BOPE To					_	5000		psi
*Max Pressure Allowed @	Previous Casing Shoe=					2445		psi *Assumes 1psi/ft frac gradient
Calculations		String	_		_			"
Max BHP (psi)		.052*Sett	ting	g Depth*N	ΛV	V=		
<u> </u>								BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12	*Se	etting De	pth	)=		NO
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22	*So	etting De	pth	)=		NO I
								*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Γ	Depth - Previo	ous	Shoe De	pth	)=		NO
Required Casing/BOPE To	est Pressure=							psi
*Max Pressure Allowed @	Previous Casing Shoe=						ĺ	psi *Assumes 1psi/ft frac gradient
Calculations		String			_			"
Max BHP (psi)		.052*Sett	ting	g Depth*N	ΛV	V=		
MASD (C. ) ( °)		DIID (0.12)	*0	-44i. P		_		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		EXAMP (0.12)			_	-		NO
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22	*So	etting De	pth	)=[]		NO PUE ALD DIVIDIO SI O
D 44 P	M DIID 22*/G #: F	)4h D '		Ch - D	- 41			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe		Jepin - Previo	Jus	Snoe De	pth	)=   <u> </u>		NO
Required Casing/BOPE To			_		_	_		psi
	Previous Casing Shoe=						1	psi *Assumes 1psi/ft frac gradient

# 43047513950000 NBU 921-35N4BS



Well name:

43047513950000 NBU 921-35N4BS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Project ID:

Location:

Surface

**UINTAH** COUNTY 43-047-51395

Design parameters:		Minimum desig	n factors:	<b>Environment:</b>	
<u>Collapse</u>		Collapse:		H2S considered?	No
Mud weight: Design is based on eva	8.330 ppg cuated pipe.	Design factor	1.125	Surface temperature: Bottom hole temperature:	74 °F : 108 °F
				Temperature gradient: Minimum section length:	1.40 °F/100ft 100 ft
		Burst:	4.00		4 400 6
		Design factor	1.00	Cement top:	1,432 ft
Burst Max anticipated surface					

pressure: 2,235 psi Internal gradient: 0.120 psi/ft Calculated BHP 2,529 psi

No backup mud specified.

Tension: 8 Round STC: 1.80 (J) 1.70 (J) 8 Round LTC: Buttress: 1.60 (J) 1.50 (J) Premium: 1.50 (B) Body yield:

Tension is based on air weight. Neutral point: 2,220 ft Directional Info - Build & Drop Kick-off point 300 ft Departure at shoe: 597 ft Maximum dogleg: 2 °/100ft

Inclination at shoe: 20° Re subsequent strings:

Next setting depth: 9,666 ft Next mud weight: 12.000 ppg Next setting BHP: 6,026 psi 19.250 ppg Fracture mud wt: Fracture depth: 2,540 ft Injection pressure: 2,540 psi

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length (ft)	Size (in)	Weight (lbs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Cost (\$)
1	2540	8.625	28.00	I-55	LT&C	2445	2540	7.892	100584
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load (psi)	Strength (psi)	Design Factor	Load (psi)	Strength (psi)	Design Factor	Load (kips)	Strength (kips)	Design Factor
1	1058	1880	1.777	2529	3390	1.34	68.5	348	5.08 J

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: December 28,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2445 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:

43047513950000 NBU 921-35N4BS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Production

Project ID:

Location:

**UINTAH** COUNTY 43-047-51395

Minimum design factors: Design parameters: **Environment:** Collapse Collapse: H2S considered? No 74 °F Mud weight: 12.000 ppg Design factor 1.125 Surface temperature: 209 °F Internal fluid density: Bottom hole temperature: 1.000 ppg Temperature gradient: 1.40 °F/100ft Minimum section length: 100 ft Burst: Design factor 1.00 Cement top: 2.062 ft **Burst** 

Max anticipated surface

pressure: Internal gradient:

Calculated BHP

3,899 psi 0.220 psi/ft

6,026 psi

No backup mud specified.

Tension: 1.80 (J) 8 Round STC: 1.80 (J) 8 Round LTC: Buttress: 1.60 (J) Premium: 1.50 (J) Body yield: 1.60 (B)

Tension is based on air weight. Neutral point: 8.150 ft Directional Info - Build & Drop

Kick-off point 300 ft Departure at shoe: 1352 ft Maximum dogleg: 2 °/100ft 0 ° Inclination at shoe:

End Run Segment Nominal True Vert Measured Drift Est. Length Size Weight Grade **Finish** Depth Depth Diameter Cost Seq (ft) (lbs/ft) (ft) (ft) (in) (in) (\$) 1 9884 I-80 9666 9884 130469 4.5 11.60 LT&C 3.875 Run Collapse Collapse Collapse **Burst Tension Tension Tension** Burst Burst Seq Load Strength Design Load Strength Design Load Strength Design (psi) (psi) **Factor** (psi) (psi) **Factor** (kips) (kips) **Factor** 1 5523 6360 1.151 6026 7780 1.29 112.1 212 1.89 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: December 28,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9666 ft, a mud weight of 12 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# **ON-SITE PREDRILL EVALUATION**

# Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-35N4BS

API Number 43047513950000 APD No 3220 Field/Unit NATURAL BUTTES

**Location: 1/4,1/4** SWSE **Sec** 35 **Tw** 9.0S **Rng** 21.0E 388 FSL 1770 FEL

GPS Coord (UTM) 626781 4427089 Surface Owner

#### **Participants**

See other comments:

# Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 36 air miles and 43.7 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35O pad will be created by significantly enlarging the existing pad of the CIGE 133 gas well. It will be enlarged in all directions except to the north. Six gas wells, to be directionally drilled, will be added. They are the NBU 921-35O1BS, NBU 921-35O1CS, NBU 921-35N4BS, NBU 921-35N4CS, NBU 921-35O4BS and NBU 921-35O4CS. The site is in moderately rolling terrain which slopes to the west. A drainage intersects the location on the south. It will be blocked with excess spoils until after drilling. After the pad is put into production its length will be reduced on this end and the drainage re-routed thru the area to the west. The surface of the pad may be sandy and need hardening. A major tributary of Sand Wash is about 1/2 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA.

#### **Surface Use Plan**

**Current Surface Use** 

Wildlfe Habitat
Existing Well Pad
Grazing

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 352 Length 475 Onsite UNTA

**Ancillary Facilities** N

#### **Waste Management Plan Adequate?**

#### **Environmental Parameters**

Affected Floodplains and/or Wetlands N

Flora / Fauna

12/30/2010 Page 1

Vegetation is a desert shrub type, which includes rabbit brush, Indian ricegrass, big sage, Russian thistle, stipa commata, greasewood, broom snakeweed, shadscale and halogeton.

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

#### **Soil Type and Characteristics**

Surface soils are a moderately deep sandy loam.

#### **Erosion Issues** N

**Sedimentation Issues** N

Site Stability Issues N

# **Drainage Diverson Required?** Y

A drainage intersects the location on the south. It will be blocked with excess spoils until after drilling. After the pad is put into production its length will be reduced on this end and the drainage re-routed thru the area to the west.

# Berm Required? N

# **Erosion Sedimentation Control Required?** Y

A drainage intersects the location on the south. It will be blocked with excess spoils until after drilling. After the pad is put into production its length will be reduced on this end and the drainage re-routed thru the area to the west.

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources?

#### **Reserve Pit**

Site-Specific Factors	Site Ra	anking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>		0	
Affected Populations			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	Final Score	40	1 Sensitivity Level

## **Characteristics / Requirements**

The proposed reserve pit is 120' x 260' x 12' deep located in a cut on the snortheast corner of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

Closed Loop Mud Required? N Liner Required? Liner Thickness 30 Pit Underlayment Required? Y

#### **Other Observations / Comments**

12/30/2010 Page 2

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Lovell Young, Grizz Oleen, Charles Chase, Colby Sutton, Doyle Holmes, Claudia Sass, (Kerr McGee), Mitch Batty, John Slaugh, (Timberline Engineering and Land Surveying), Jim Davis (SITLA) and Ben Williams, (UDWR).

Floyd Bartlett 11/30/2010 **Evaluator Date / Time** 

12/30/2010 Page 3

# **Application for Permit to Drill Statement of Basis**

12/30/2010 Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo		Status	3	Well Type	Surf Owne	r CBM
3220	43047513950000		LOCK	ED	GW	S	No
Operator	KERR-MCGEE (	OIL & GAS	S ONSHOR	RE, L.P.	Surface Owner-API	D	
Well Name	NBU 921-35N4B	S			Unit	NATURAL	BUTTES
Field	NATURAL BUT	TES			Type of Work	DRILL	
Location	SWSE 35 9S	21E S	388 FSL	1770 FEL	GPS Coord (UTM)	626784E 44	27079N

#### **Geologic Statement of Basis**

Kerr McGee proposes to set 2,540' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,100'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 35. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up to cover the base of the moderately saline ground water in order to isolate fresher waters uphole.

Brad Hill 12/15/2010 **APD Evaluator Date / Time** 

#### **Surface Statement of Basis**

The general area is within the Natural Buttes Unit in the lower portion of the Sand Wash Drainage of Uintah, County, approximately 36 air miles and 43.7 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads to the site. Topography of the Sand Wash area is characterized by broad open flats dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs, furnishing water for antelope or livestock.

The NBU 921-35O pad will be created by significantly enlarging the existing pad of the CIGE 133 gas well. It will be enlarged in all directions except to the north. Six gas wells, to be directionally drilled, will be added. They are the NBU 921-35O1BS, NBU 921-35O1CS, NBU 921-35N4BS, NBU 921-35N4CS, NBU 921-35O4BS and NBU 921-35O4CS. The site is in moderately rolling terrain which slopes to the west. A drainage intersects the location on the south. It will be blocked with excess spoils until after drilling. After the pad is put into production its length will be reduced on this end and the drainage re-routed thru the area to the west. The surface of the pad may be sandy and need hardening. A major tributary of Sand Wash is about 1/2 mile to the east of the site and the White River about 3 mile down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the only site in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis represented SITLA at the pre-site investigation. Mr. Davis had no concerns pertaining to this location excepted as covered above. SITLA provided a seed mix to be used when reclaiming the site.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

12/30/2010

# **Application for Permit to Drill Statement of Basis**

**Utah Division of Oil, Gas and Mining** 

Page 2

Floyd Bartlett 11/30/2010
Onsite Evaluator Date / Time

## **Conditions of Approval / Application for Permit to Drill**

**Category** Condition

Pits A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface Drainages adjacent to the proposed pad shall be diverted around the location. Surface The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 11/23/2010 **API NO. ASSIGNED:** 43047513950000

WELL NAME: NBU 921-35N4BS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

PROPOSED LOCATION: SWSE 35 090S 210E **Permit Tech Review:** 

> **SURFACE:** 0388 FSL 1770 FEL **Engineering Review:**

> **BOTTOM: 0410 FSL 2164 FWL** Geology Review:

**COUNTY: UINTAH** 

**LATITUDE: 39.98627 LONGITUDE:** -109.51508

UTM SURF EASTINGS: 626784.00 NORTHINGS: 4427079.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: UO 01194 ST PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE

**SURFACE OWNER: 3 - State COALBED METHANE: NO** 

#### **RECEIVED AND/OR REVIEWED: LOCATION AND SITING:**

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: STATE/FEE - 22013542

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

**Drilling Unit** Oil Shale 190-13

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

**Effective Date:** 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting **Fee Surface Agreement** 

✓ Intent to Commingle R649-3-11. Directional Drill

**Commingling Approved** 

**Comments:** Presite Completed

Stipulations:

3 - Commingling - ddoucet 5 - Statement of Basis - bhill 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047513950000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

# **Permit To Drill**

\*\*\*\*\*

Well Name: NBU 921-35N4BS
API Well Number: 43047513950000
Lease Number: UO 01194 ST
Surface Owner: STATE

**Approval Date:** 12/30/2010

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

# **Commingle:**

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

API Well No: 43047513950000

# **Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

#### **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

#### **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST				
SUNDF	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	sals to drill new wells, significantly deepen exist gged wells, or to drill horizontal laterals. Use Al		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047513950000				
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE NO treet, Suite 600, Denver, CO, 80217 3779	JMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL	COUNTY: UINTAH						
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35		STATE: UTAH					
11. CHE	CK APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPORT,	OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
□ NOTICE OF INTENT Approximate date work will start: □ SUBSEQUENT REPORT Date of Work Completion:  ✓ SPUD REPORT Date of Spud: 2/1/2011	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION	CHANGE TUBING CHANGE TUBING COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL VENT OR FLARE	□ CASING REPAIR     □ CHANGE WELL NAME     □ CONVERT WELL TYPE     □ NEW CONSTRUCTION     □ PLUG BACK     □ RECOMPLETE DIFFERENT FORMATION     □ TEMPORARY ABANDON     □ WATER DISPOSAL				
DRILLING REPORT Report Date:		SI TA STATUS EXTENSION	APD EXTENSION				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.  RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIXAccepted by the SPUD WELL LOCATION ON FEBUARY 01, 2011 AT 12:45 HRS.  Utah Division of Oil, Gas and Mining  FOR RECORD ONLY							
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst					
SIGNATURE N/A		<b>DATE</b> 2/2/2011					

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST				
SUNDF	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
	sals to drill new wells, significantly deepen exis ugged wells, or to drill horizontal laterals. Use A		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047513950000				
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE N Street, Suite 600, Denver, CO, 80217 3779	<b>IUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH				
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPORT,	OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
_	☐ ACIDIZE ☐	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS ☐	CHANGE TUBING	☐ CHANGE WELL NAME				
2/7/2011	☐ CHANGE WELL STATUS ☐	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE				
SUBSEQUENT REPORT	☐ DEEPEN ☐	FRACTURE TREAT	□ NEW CONSTRUCTION				
Date of Work Completion:	☐ OPERATOR CHANGE ☐	PLUG AND ABANDON	☐ PLUG BACK				
	☐ PRODUCTION START OR RESUME ☐	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON				
	☐ TUBING REPAIR ☐	VENT OR FLARE	☐ WATER DISPOSAL				
☐ DRILLING REPORT	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	☐ APD EXTENSION				
Report Date:	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: Pit Refurb (ACTS)				
	l DMPLETED OPERATIONS. Clearly show all pertine as Onshore, LP is requesting to re		·				
this multi-well pad fo	r completion operations. The refu	urb pit will be relined pe	r Approved by the				
	the COA of the APD. Upon comple						
	lso requesting to utilize this pit a completion operations in the area		N				
	s placed on the location. The truc						
these tanks before t	the water is placed into the refurl	bed pit. The purpose of	James James				
	ollect any hydro-carbons that ma						
	etion operations before releasing						
keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections.							
,	·	·					
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE					
Danielle Piernot	720 929-6156	Regulatory Analyst					
SIGNATURE N/A		<b>DATE</b> 2/3/2011					



# The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

**Sundry Conditions of Approval Well Number 43047513950000** 

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

Print Form

# **BLM - Vernal Field Office - Notification Form**

Oper	rator KERR-McGEE OIL & GA	S Rig Name/	/# <u>BUC</u> I	KET RIG
Submitted By ANDY LYTLE Phone Number 720.929.6100				
Well	Name/Number NBU 921-35N	14BS		
_	Qtr <u>swse</u> Section <u>35</u>	-	<u> </u>	lange <u>21E</u>
Leas	e Serial Number <u>UO 01194 S</u>	ST <sub>.</sub>	<u>.</u>	
API I	Number <u>4304751395</u>			
	<u>d Notice</u> – Spud is the initial pelow a casing string.	spudding of	the we	ll, not drilling
	Date/Time <u>01/31/2011</u>	13:00 HRS A	AM 🔲	РМ
<u>Casiı</u> time	ng – Please report time casi	ing run starts	, not ce	ementing
	s. Surface Casing			RECEIVED
<b>√</b>	Intermediate Casing			JAN 2 8 2011
	Production Casing		mu (	OF OH OAO D MINING
	Liner		DIV.	OF OIL, GAS & MINING
	Other			
	Date/Time <u>03/03/2011</u>	08:00 HRS A	AM 🔲	РМ
BOP		casing noint		
	<ul><li>Initial BOPE test at surface casing point</li><li>BOPE test at intermediate casing point</li><li>30 day BOPE test</li></ul>			
H				
	Other			
	Date/Time	A	AM 🗌	РМ
Rem	arks estimated date and time. PLEA	SE CONTACT KENNY	GATHINGS	AT

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING  SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL Gas Well  2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.  3. ADDRESS OF OPERATOR: PHONE NUMBER: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  720 929-6515 Ext			5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES 8. WELL NAME and NUMBER: NBU 921-35N4BS 9. API NUMBER: 43047513950000 9. FIELD and POOL OF WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSE Section: 35 Township: 09.0S Range: 21.0E Meridian: S  11.			COUNTY: UINTAH  STATE: UTAH	
TYPE OF SUBMISSION	CK APPROPRIATE BOXES TO INDICATE	TYPE OF ACTION	OR OTHER DATA	
□ NOTICE OF INTENT Approximate date work will start: □ SUBSEQUENT REPORT Date of Work Completion: □ SPUD REPORT Date of Spud:  ✓ DRILLING REPORT Report Date: 2/20/2011	ACIDIZE  CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION	ALTER CASING  CHANGE TUBING  COMMINGLE PRODUCING FORMATIONS  FRACTURE TREAT  PLUG AND ABANDON  RECLAMATION OF WELL SITE  SIDETRACK TO REPAIR WELL  VENT OR FLARE  SI TA STATUS EXTENSION  OTHER	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU PROPETRO AIR RIG ON FEBRUARY 18, 2011. DRILLED 11" SURFACE  HOLE TO 2560'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 140 BBLS FRESAccepted by the  WATER. PUMP 20 BBLS GEL WATER. LEAD CEMENT W/ 200 SX CLASS G PRED DIVISION OF  @ 11.0 PPG, 3.82 YD. TAILED CEMENT W/ 200 SX CLASS G PRED LITE @ OII Gas and Mining  PPG, 1.15 YD. DROP PLUG ON THE FLY, DISPLACED W/ 155 BBLS WEIGH RECORD ONLY  BUMP PLUG & HOLD 900 PSI FOR 5 MIN. FLOAT HELD. NO CEMENT TO  SURFACE. TOP OUT THRU 1" PIPE W/ 125 SX CLASS G PREM LITE @ 15.8  PPG, 1.15 YD. WOC. TOP OUT #2 W/ 125 SX CLASS G PREM LITE @ 15.8  PPG, 1.15 YD. NO CEMENT TO SURFACE. WORT.				
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		<b>DATE</b> 2/23/2011		

Sundry Number: 13780 API Well Number: 43047513950000

			FORM 9	
STATE OF UTAH			FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSI	HORE, L.P.		9. API NUMBER: 43047513950000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Si	PHON treet, Suite 600, Denver, CO, 80217 3779	<b>E NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35	P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
☐ NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
Approximate date work will start:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	□ NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	□ PLUG AND ABANDON	□ PLUG BACK	
_				
SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION	
	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON	
✓ DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
Report Date: 3/24/2011	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
3/24/2011	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU ROTARY RIG. FINISHED DRILLING FROM 2560' TO 9910' ON MARCH 23,  2011. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED  PRODUCTION CASING. RELEASE PIONEER RIG 54 ON MARCH 24, 2011 @Accepted by the  21:30 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELLUTAH Division of  COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITORS. Gas and Mining  FOR RECORD ONLY				
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		<b>DATE</b> 3/25/2011		

Sundry Number: 16143 API Well Number: 43047513950000

STATE OF UTAH			FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Uso		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047513950000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONI treet, Suite 600, Denver, CO, 80217 3779	<b>E NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35	(P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
THE SUBJECT WELL	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE ✓ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  OMPLETED OPERATIONS. Clearly show all perting WAS PLACED ON PRODUCTION OGICAL WELL HISTORY WILL BI WELL COMPLETION REPOR	ON 06/22/2011 AT 1:45 E SUBMITTED WITH THE IT. A U		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst		
SIGNATURE	433 /01-/024	DATE		
N/A		6/23/2011		

Sundry Number: 17050 API Well Number: 43047513950000

STATE OF UTAH			FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	sals to drill new wells, significantly deepen exi ugged wells, or to drill horizontal laterals. Use		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047513950000	
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE treet, Suite 600, Denver, CO, 80217 3779	NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35	Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH	
11. CHE	CK APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPORT,	OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
_	☐ ACIDIZE ☐	ALTER CASING	CASING REPAIR	
Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME	
7/28/2011	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE	
SUBSEQUENT REPORT	☐ DEEPEN ☐	FRACTURE TREAT	☐ NEW CONSTRUCTION	
Date of Work Completion:	☐ OPERATOR CHANGE ☐	PLUG AND ABANDON	☐ PLUG BACK	
	☐ PRODUCTION START OR RESUME ☐	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON	
	☐ TUBING REPAIR ☐	VENT OR FLARE	☐ WATER DISPOSAL	
☐ DRILLING REPORT	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	☐ APD EXTENSION	
Report Date:	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: Well Shut Off	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  The operator request authorization to workover the subject well location. The workover operations will consist of water shut off by perforation cement squeeze. Stage 8 perfs from 6707-6870 will be squeezed off with cement.  Please see attached procedure.  Approved by the Utah Division of Oil, Gas and Mining  Date: 08/02/2011  By:				
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE  Regulatory Analyst II		
Gina Becker  SIGNATURE	720 929-6086	Regulatory Analyst II  DATE		
SIGNATURE   N/A		7/28/2011		

Name: NBU 921-35N4BS

Location: SESW SEC35 T9S R21E

**Uintah County, UT** 

#### PERF ABANDONMENT/ WATER SHUT OFF

**ELEVATIONS:** 5100' GL 5119' KB Frac Registry TVD: 9691'

**TOTAL DEPTH:** 9910' **PBTD:** 9851'

**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 2547'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 BT&C @ Surface-9852' and 9895-9896'

4 1/2", 11.6#, P-110 BT&C @ 9852-9895' Marker Joint **4922-4942' and 7593-7613**'

EOT @ 9078'

#### **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPACITIES	
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)
2 3/8" 4.7# J-55	7,700	8,100	1.901"	0.00387	0.1624
tbg					
4 ½" 11.6# I-80	7780	6350	3.875"	0.0155	0.6528
(See above)					
4 ½" 11.6# P-	10691	7580	3.875"	0.0155	0.6528
110					
2 3/8" by 4 ½"				0.0101	0.4227
Annulus					

#### TOPS: BOTTOMS:

1492' Green River Top

1787' Bird's Nest Top

2385' Mahogany Top

4915' Wasatch Top 7641' Wasatch Bottom

7641' Mesaverde Top 9910' Mesaverde Bottom (TD)

**T.O.C.** @ 130' (Halliburton CBL - 4/21/2011)

#### **Contacts:**

VILLA, JOEL 828-8923 OPERATOR RASMUSSEN, JERRY 828-8239 FOREMAN JENSEN, STEVE 828-6113 MECH LEAD PORTILLO, JORDAN 781-9785/828-6221 ENGINEER

#### **Relevant History:**

- June 2011 Completed well IP'd At 1.2 mmcf/day, Stage 7 Perf only (5869-5884')
- July 2011 Well test showed well making 465mcf/day and 300 bbls/day on a 18 choke
  - Production log showed high inflow of water from Stage 4-6

#### **Symptoms:**

• High LGR. Water shut-off needed to sustain production.

#### **Procedure Outline:**

- MIRU. N/D WH. N/U BOP. Unland tubing and TOOH.
- With Wireline, RIH w/ gauge ring and junk basket to ~8690'. RIH W/ 4-1/2" CBP set same @ ~8660'. POOH. RIH w/ 4-1/2" CICR on tubing and set same @ ~8400'. Sting into CICR and establish injection rate.
- R/U cement company and pump recommended cement job into perforations from 8444'- 8644', based off injection rate and pressure. PUH w/ stinger and cap with CICR with cement. Reverse circulate clean. TOOH.
- RIH w/ 4-1/2" CICR on tubing and set same @ ~8200'. Sting into CICR and establish injection rate.
- R/U cement company and pump recommended cement job into perforations from 8263'- 8346', based off injection rate and pressure. PUH w/ stinger and cap with CICR with cement. Reverse circulate clean. TOOH.
- RIH w/ 4-1/2" CICR on tubing and set same @ ~7940'. Sting into CICR and establish injection rate.
- R/U cement company and establish injection rate into perfs 7978'-8110'. Pump recommended cement job into perforations from 7978'-8110', based off injection rate and pressure. PUH w/stinger and cap with CICR with cement. Reverse circulate clean. TOOH to 5900'.
- Pump recommended balanced plug cement job into perforations from 5869'-5884', based off injection rate and pressure. PUH above calculated cement top with no leak and reverse circulate tubing until clean. Apply appropriate pressure and WOC.
- POOH. RIH w/ 3-7/8" w/mill. D-O balance plugs, CBP's and CICR's, replace mill when necessary. Test each interval for 10 min and 1,000 psi, contact engineer if squeezes don't test.
- TOOH remove mill. Land tubing at +/- 9130'.
- N/D BOP. N/U WH. RDMO. RTP

#### **Completion Information:**

Name NBU 921-35N4BS Perforation and CBP Summary

		Perfo	rations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Fra	cture Cover	age
1	MESAVERDE	9378	9379	4	4	9375.5	to	9384.5
	MESAVERDE	9480	9482	4	8	9462	to	9489
	MESAVERDE	9655	9658	3	9	9649	to	9660
	# of Perfs/stage				21	CBP DEPTH	9,320	
2	MESAVERDE	9112	9113	3	3	9107.5		9144.5
	MESAVERDE	9137	9138	3	3	9107.5		9144.5
	MESAVERDE	9180	9182	3	6	9158.5		9187
	MESAVERDE	9216	9218	3	6	9212		9231
	MESAVERDE	9278	9280	3	6	9272	to	9290.5
	# of Perfs/stage				24	CBP DEPTH	9,074	
3	MESAVERDE	8814	8815	3	3	8792.5		8853.5
	MESAVERDE	8840	8841	3	3	8792.5		8853.5
	MESAVERDE	8944	8946	3	6	8931.5		8958
	MESAVERDE	8973	8975	3	6	8961.5		8980.5
	MESAVERDE	9042	9044	3	6	8986.5	to	9051.5
	# of Perfs/stage				24	CBP DEPTH	8,694	
				_	-			
4	MESAVERDE	8444	8446	3	6	8437.5		8448
	MESAVERDE	8569	8571	4	8	8542	<b>_</b>	8575
	MESAVERDE	8642	8644	4	8	8620	to	8645.5
						00000000	0.000	
	# of Perfs/stage				22	CBP DEPTH	8,386	
	MEGAVEDDE	0000	0005			0050	4-	0074.5
5	MESAVERDE	8263	8265	4	8	8258		8271.5
	MESAVERDE	8280	8282	4	8	8273		8284
	MESAVERDE	8344	8346	4	8	8332	to	8356.5
	# of Dorfo/otogo				24	CDD DEDTU	0.460	
	# of Perfs/stage				24	CBP DEPTH	8,160	
6	MESAVERDE	7978	7980	4	8	7972.5	to	7985
0	MESAVERDE	8026	8028	4	8	8011	to	8031.5
	MESAVERDE	8108	8110	4	8	8106.5		8115
	MESAVERDE	0100	0110	4	0	6100.3	10	0113
	# of Perfs/stage				24	CBP DEPTH	5,934	
	# or rens/stage				24	COLDELIA	0,834	
7	WASATCH	5869	5872	4	12	5863	to	5873.5
,	WASATCH	5880	5884	3	12	5875		5894
	YYOOATOTT	3000	3004	3	12	3073	10	J084
	# of Perfs/stage				24	CBP DEPTH	5,819	
	" or removatage				24	ODI DEFIN	1 3,013	
	Totals				163			

### **Production Log Results:**

# Fluid Entry Results

Company: Anadarko

Well: NBU 921-35N4BS

Date: 6-Jul-11

Field:

Gas: 462 mcf/D Water: 484 B/D

Perforations	Wa	ater	Gas							
Depth (ft)	Surface B/D	%	Surface mcf/d	%						
5869-5884		BALANCE PL	UG							
7940		SET CICR								
7978-7980	40	8.28%	Trace							
8026-8028	29	6.00%	Trace							
8108-8110	Trace			0.00%						
8200		SET CICR								
8263-8265	31	6.42%	Trace							
8280-8282	Likely		Trace							
8344-8346	153	31.68%	Trace							
8400		SET CICF	₹							
8444-8446	60	12.42%	Trace							
8569-8571	18	3.73%	Trace							
8642-8644	Trace		42	7.84%						
8660		SET CBP	)							

STATE OF UTAH AMENDED REPORT FORM 8 DEPARTMENT OF NATURAL RESOURCES (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME WELL GAS VELL OTHER UTU63047A b. TYPE OF WORK: 8. WELL NAME and NUMBER: DIFF. RESVR. NBU 921-35N4BS WELL RE-ENTRY 2. NAME OF OPERATOR: 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304751395 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT STATE CO ZIP 80217 NATURAL BUTTES P.O.BOX 173779 CITY DENVER (720) 929-6100 4. LOCATION OF WELL (FOOTAGES) 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: BHL reviewed by JP AT SURFACE: SWSE 388 FSL 1770 FEL S35, T9S, R21E SWSE 35 9S 21E S AT TOP PRODUCING INTERVAL REPORTED BELOW: SESW 461 FSL 2183 FWL S35, T9S, R21E 12. COUNTY 13. STATE AT TOTAL DEPTH: SESW 413 FSL 2235 FWL S35, T9S, R21E UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): READY TO PRODUCE 🗸 ABANDONED 2/1/2011 3/23/2011 6/22/2011 5100 GL 19. PLUG BACK T.D.: MD 9,852 18. TOTAL DEPTH: MD 9.910 21. DEPTH BRIDGE 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* PLUG SET: TVD 9,691 TVD 9,633 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 WAS WELL CORED? YES (Submit analysis) **ACBL-CHI TRIPLE** NO 🗸 WAS DST RUN? YES (Submit report) COMBO-RMTE-GRC-RCBL-BHP-HDIL/ZDL/CNGR DIRECTIONAL SURVEY? NO YES 🗸 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY BOTTOM (MD) HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) CEMENT TOP \*\* AMOUNT PULLED VOLUME (BBL) DEPTH NO. OF SACKS 20" STL 36.7# 40 28# 11" 8 5/8" **IJ-55** 2,547 650 0 7 7/8" 4 1/2" 1-80 11.6# 9,896 130 1,874 25. TUBING RECORD DEPTH SET (MD) PACKER SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 9.079 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME BOTTOM (MD) TOP (TVD) TOP (MD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) SIZE NO. HOLES PERFORATION STATUS (A) WASATCH 5,869 5,884 5,869 5.884 0.36 24 Open Squeezed 0.36 (B) MESAVERDE 7.978 9.658 7.978 9.658 139 Open Squeezed (C) Open Squeezed (D) Squeezed 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND TYPE OF MATERIAL JUL 25 2011 7978 - 9658 PUMP 4,954 BBLS SLICK H2O & 89,556 LBS SAND DID NOT FRAC STAGE 7 (WASATCH) DIV. OF OIL, GAS & MINING 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ✓ DIRECTIONAL SURVEY ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER:

31	INITIAL	PRODI	ICTION

#### INTERVAL A (As shown in item #26)

DATE FIRST PR		TEST DATE:		HOURS TESTED	-		OIL BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
6/22/2011		6/24/2011	l	24		RATES: →	0	1,191	721	FLOWING
20/64	TBG. PRESS. 995	csg. press. 1,947	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF: 1,191	WATER - BBL: <b>721</b>	INTERVAL STATUS: PROD
				INTI	ERVAL B (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	:	TEST PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS MCF:	WATER - BBL:	INTERVAL STATUS:
				INTI	ERVAL C (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	:	TEST PRODUCTION RATES: →	OIL BBL:	GAS – MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER BBL:	INTERVAL STATUS:
				INTI	ERVAL D (As sho	wn in item #26)				***************************************
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	HOURS TESTED:		OIL BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY			24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS:
32. DISPOSITIO	ON OF GAS (Sold,	Used for Fuel, Ve	nted, Etc.)	•		<del>*************************************</del>		***************************************	·	<del></del>

#### 33. SUMMARY OF POROUS ZONES (Include Aquifers):

34. FORMATION (Log) MARKERS:

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1,492 1,787 2,385 4,915 7,641	7,641 9,910	D		

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history, perforation report and final survey. Completion chrono details individual frac stages.

36.	i nereby	certity	tnat tne r	oregoing	and atta	cnea imo	rmation i	s complete	and c	orrect as	determine	d from a	li available	e records.

NAME (PLEASE PRINT) ANDREW LYTLE

TITLE REGULATORY ANALYST

SIGNATURE

<sub>DATE</sub> 7/20/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

### **Operation Summary Report**

Well: NBU 921-35N4BS (YELLOW) Spud Conductor: 2/1/2011 Spud Date: 2/18/2011 Project: UTAH-UINTAH Site: NBU 921-350 PAD Rig Name No: PROPETRO 12/12, PIONEER 54/54 Event: DRILLING Start Date: 3/18/2011 End Date: 3/24/2011

Active Datum: RKB @5,119.00ft (above Mean Sea Level) UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0

Levei)								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/18/2011	18:00 - 19:00	1.00	MIRU	01	Α	Р	· · · · · · · · · · · · · · · · · · ·	MOVE RIG IN OFF NBU 921-3501CS
	19:00 - 19:30	0.50	MIRU	01	В	Р		RIG UP
	19:30 - 20:00	0.50	DRLSUR	06	Α	Р		P/U 1.83 DEG BENT HOUSING HUNTING MTR SN 8009 . 7/8 LOBE .17 RPG. M/U Q506 SN 7133301 1ST RUN, W/ 6-18'S. INSTALL RUBBER
	20:00 - 21:00	1.00	DRLSUR	02	С	Þ		SPUD SURFACE 02/18/2011 @ 20:00 HRS. DRILL 11" SURFACE HOLE F/40'-210' (170' @ 170'/HR) PSI ON/ OFF 700/450, UP/ DOWN/ ROT 25/20/22. 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM 15-18K WOB
	21:00 - 23:00	2.00	DRLSUR	06	Α	P		TOH,P/U DIR TOOLS & SCRIBE, TIH T/210'
·	23:00 - 0:00	1.00	DRLSUR	02	D	Р		DRILL/ SLIDE 11" SURFACE HOLE F/ 210'-400' (190' @ 190'/HR) PSI ON/ OFF 785/590, UP/

						-	1.10
	19:30 - 20:00	0.50	DRLSUR	06	Α	Р	P/U 1.83 DEG BENT HOUSING HUNTING MTR SN 8009 . 7/8 LOBE .17 RPG. M/U Q506 SN 7133301 1ST RUN, W/ 6-18'S. INSTALL RUBBER
	20:00 - 21:00	1.00	DRLSUR	02	С	Þ	SPUD SURFACE 02/18/2011 @ 20:00 HRS. DRILL 11" SURFACE HOLE F/40'-210' (170' @ 170'/HR) PSI ON/ OFF 700/450, UP/ DOWN/ ROT 25/20/22. 532 GPM, 45 RPM ON TOP DRIVE,90 RPM ON MM 15-18K WOB
	21:00 - 23:00	2.00	DRLSUR	06	Α	P	TOH,P/U DIR TOOLS & SCRIBE, TIH T/210'
	23:00 - 0:00	1.00	DRLSUR	02	D	P	DRILL/ SLIDE 11" SURFACE HOLE F/ 210'-400' (190' @ 190'/HR) PSI ON/ OFF 785/590, UP/ DOWN/ ROT 48/39/42 136 SPM, 532 GPM, 18-22K WOB, 45 RPM ON TOP DRIVE,90 RPM ON MM, CIRC RESERVE PIT
2/19/2011	0:00 - 5:30	5.50	DRLSUR	02	D	Р	DRILL/ SLIDE 11" SURFACE HOLE F/ 400'-1000' (600' @ 109'/HR) PSI ON/ OFF 1050/740, UP/ DOWN/ ROT 54/45/50 136 SPM, 532 GPM, 18-22K WOB, 45 RPM ON TOP DRIVE,90 RPM ON MM, CIRC RESERVE PIT
	5:30 - 15:30	10.00	DRLSUR	02	D	P	DRILL/ SLIDE 11" SURFACE HOLE F/1000'-1870' (870' @ 87'/HR) PSI ON/ OFF 1290/1070, UP/ DOWN/ ROT 70/52/61 136 SPM, 532 GPM, 18-22K WOB, 45 RPM ON TOP DRIVE,90 RPM ON MM, CIRC RESERVE PIT
	15:30 - 23:30	8.00	DRLSUR	02	D	Р	DRILL/ SLIDE 11" SURFACE HOLE F/1870'-2560' (690' @ 86'/HR) PSI ON/ OFF 1450/1250, UP/ DOWN/ ROT 82/65/70 136 SPM, 532 GPM, 18-22K WOB, 45 RPM ON TOP DRIVE,90 RPM ON MM, CIRC RESERVE PIT(TD SURF, HOLE)
	23:30 - 0:00	0.50	DRLSUR	05	С	P	CIRC & COND HOLE F/LAY DOWN,LÓGGING & 8 5/8" SURF. CSG
2/20/2011	0:00 - 1:30	1.50	DRLPRO	05	С	Р	CONT T/ CIRC & COND HOLE F/L/D,LOGGING & 8 5/8" SURF. CSG
	1:30 - 5:00	3.50	DRLPRO	06	Þ	Р	LAY DOWN DRILL STRING,11" BHA & DIR TOOLS
	5:00 - 7:30	2.50	DRLPRO	11	D	P	HOLD SAFTEY MEETING R/U PIONEER LOGGING EQUIP. & RUN CALIPER LOG F/2485' T/40 USED 2 ARM CALIPER'(LOGGERS TD 2519',DRILLERS TD 2560'),RIG DOWN LOGGERS
	7:30 - 8:30	1.00	CSG	12	Α	P	RIG UP TO RUN 8 5/8" 28# SURF. CSG
	8:30 - 12:00	3.50	CSG	12	С	Р	HOLD SAFTEY MEETING,RUN FLOAT SHOE, SHOE JNT,.BAFFEL& 56 JNTS 8 5/8" 28# LT&C SURF. CSG W/THE SHOE SET @2532' & THE BAFFEL SET @ 2484',FILL PIPE & WASH CSG F/2500' T/2532' (RAN 20 CENTRALIZERS)

12:00 - 12:30 0.50 CSG 12 Ρ RUN 100' 1" PIPE DOWN ANNULUS,R/U PRO PETRO CEMENT EQUIP

# **Operation Summary Report**

Well: NBU 92	1-35N4BS (YELLC	OW)	Spud Co	onductor	: 2/1/201	1	Spud Date: 2/18/2011				
Project: UTAH	I-UINTAH		Site: NB	U 921-3	50 PAD		Rig Name No: PROPETRO 12/12, PIONEER 54/54				
Event: DRILLI	NG		Start Da	te: 3/18/	2011		End Date: 3/24/2011				
Active Datum: _evel)	RKB @5,119.00ft (	(above Mean	Sea	l			E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)				
	12:30 - 14:00 14:00 - 16:00	2.00	CSG	12	E A	P	HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 140 BBLS OF 8.3# H20 AHEAD. FUL CIRC. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. FULL CIRC. PUMP 200 SX(136.1 BBLS) 11# 3.82 YIELD LEAD CEMENT, PUMP 200 SX (41 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). DROP PLUG ON FLY AND DISPLACE W/155 BBLS OF 8.3# H20.LOST CIRC 111 BLLS INTO DISPLACEMENT LIFT PRESSURE WAS 400 PSI, BUMP PLUG AND HOLD 900 PSI FOR 5 MIN. FLOAT HELD,NO CEMENT TO SURF. WAIT ON CEMENT				
	16:00 - 16:30	0.50	CSG	12	F	Р	TOP OUT THRU 1" PIPE W/125 SKS 15.8 PPG				
							CLASS "G" CEMENT W/4% CACL2 & 1/4#/SK FLOCELE,NO CEMENT TO SURF.				
	16:30 - 18:00	1.50	CSG	13	Α	P	WAIT ON CEMENT				
	18:00 - 18:30	0,50	CSG	12	F	₽	TOP W/125 SKS 15.8 PPG CLASS "G" CEMENT W/4% CACL2 & 1/4#/SK FLOCELE,NO CEMENT TO SURF.RELEASE RIG @ 18:30				
	18:30 - 18:30	0.00	CSG				CONDUCTOR CASING: Cond. Depth set: 40'				
							Cement sx used: 28  SPUD DATE/TIME: 2/18/2011 20:00				
3/18/2011	12:00 - 12:00	100	DRI BRO	04	6		SURFACE HOLE: Surface From depth: 40' Surface To depth: 2,560 Total SURFACE hours: 25.50 Surface Casing size: 8 5/8 # of casing joints ran: 57 Casing set MD: 2,532.0 # sx of cement: 200/200/250 Cement blend (ppg:) 11.0/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: Describe cement issues: NONE Describe hole issues: NONE				
3/18/2011	12:00 - 13:00	1.00	DRLPRO	01	С	P	SKID RIG TO NBU-921-35N4BS				
	13:00 - 14:30	1.50	DRLPRO	14	A	P	N/U BOPE				
	14:30 - 17:30	3.00	DRLPRO	15	A	P	TEST BOPE 5000 CSG 1500				
	17:30 - 18:00	0.50	DRLPRO	14	В	P	RUN W/BUSHING				
	18:00 - 18:30	0.50	DRLPRO	06	Α .	P	RIH TO 2418'				
	18:30 - 19:00	0.50	DRLPRO	09	A	P	SLIP AND CUT DRLG LINE				
	19:00 - 20:30	1.50	DRLPRO	02	F	Р	DRLG CMT F/2418' FC @2501' SHOE @ 2543' FORMATION TO 2595' 10' FLAIR				
	20:30 - 21:30	1.00	DRLPRO	16	В	Р	PUMP 10BBL 12.4 PPG 70 VISC MUD SPOT ON BOTTOM POOH 200' CLOSE BAG PUMP WITH TESTER 5 BBL NO PRESSURE PUMP WITH RIG PUMP 5 BBL 618 PSI WELL HEL 54 PSI FOR EMW OF 12.82 TIH 200'				

7/15/2011

3:42:08PM

# **Operation Summary Report**

 Well: NBU 921-35N4BS (YELLOW)
 Spud Conductor: 2/1/2011
 Spud Date: 2/18/2011

 Project: UTAH-UINTAH
 Site: NBU 921-35O PAD
 Rig Name No: PROPETRO 12/12, PIONEER 54/54

 Event: DRILLING
 Start Date: 3/18/2011
 End Date: 3/24/2011

vent: DRILLIN				Start Dat					End Date: 3/24/2011
Active Datum: F ₋evel)	RKB @	5,119.00ft (	above Mea	n Sea	UWI: S	W/SE/0/	9/S/21/E	/35/0/0/6/PM/S	3/388.00/E/0/1,770.00/0/0
Date	4 1 1 1 2 2 1 1 1 1	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/19/2011	21:30	- 0:00 - 17:00	2.50	DRLPRO	02	D D	P	(3)	DRLG F/ 2595' TO 2835', 260' @ 104' PH WOB 22, MW 8.4 VIS 27, RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 100-95-98, PSI ON/OFF 1500-1200, TOR 8-6 K ROT=1.84 HRS 204' @ 110.86 PH SLIDE=.66 HRS 56' @ 100 PH DRLG F/ 2835' TO 4822', 1987' @ 116' PH
3/19/2011					02				WOB 22, MW 8.4 VIS 27, RPM 60, MM 134, SPM 165, GPM 595, PU/SO/ROT 135-105-120 PSI ON/OFF 1800-1400, TOR 8-6 K ROT=8.48 HRS 1439' @ 169.96 PH SLIDE= 8.52 HRS 548' @ 100 PH
	17:00	- 17:30	0.50	DRLPRO	07	Α	Р		RIG SERVICE
		- 0:00	6.50	DRLPRO	02	D	P		DRLG F/ 4822' TO 5675', 853' @ 131' PH WOB 22, MW 8.4 VIS 27, RPM 60, MM 134, SPM 165, GPM 595, PU/SO/ROT 142-115-125 PSI ON/OFF 1800-1400, TOR 8-6 K ROT=5.08 HRS 788' @ 155.11 PH SLIDE= 1.42 HRS 65' @ 45.77 PH
3/20/2011		- 16:00	16.00	DRLPRO	02	D	Р		DRLG F/ 5675' TO 7383' 1708' @ 106.75' PH WOB 22, MW 9.6 VIS 34, RPM 60, MM 134, SPM 165, GPM 595, PU/SO/ROT 199-145-160 PSI ON/OFF 2700-2400, TOR 10-9 K ROT=5.08 HRS 788' @ 155.11 PH SLIDE= .59 HRS 33' @ 55.93 PH
		- 16:30	0.50	DRLPRO	07	Α	P		RIG SERVICE
0/04/0044		- 0:00	7.50	DRLPRO	02	D	P		DRLG F/ 7383' TO 7780' 397' @ 52.93' PH WOB 22, MW 9.6 VIS 34 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 205-150-167 PSI ON/OFF 2000-1600, TOR 10-9 K ROT=4.75 HRS 358' @ 75.36' PH SLIDE= 2.75 HRS 39' @ 14.18' PH 10' FLAIR CONN GAS @ 7600'
3/21/2011		- 14:30 - 15:00	14.50 0.50	DRLPRO	02	D	P		DRLG F/ 7780' TO 8524' 744' @ 51.31' PH WOB 22, MW 9.6 VIS 34 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 205-150-167 PSI ON/OFF 2000-1600, TOR 10-9 K ROT=7.92 HRS 622' @ 77.94' PH SLIDE= 6.58 HRS 122' @ 18.58' PH 10' FLAIR CONN GAS @ 7600' 60' FLAIR DRLG GAS @ 8365' RIG SERVICE
		- 0:00					•		
			9.00	DRLPRO	02	D	P		DRLG F/ 8524' TO 8842' 318' @ 35.33' PH WOB 22, MW 11.7 VIS 38 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 207-155-169 PSI ON/OFF 2000-1600, TOR 10-9 K ROT= HRS 358' @ 75.36' PH SLIDE= 4.16 HRS 41' @ 9.85' PH 30' CONN GAS FLAIR
3/22/2011		- 11:00	11.00	DRLPRO	02	D	P		DRLG F/ 8842' TO 9283' 441' @ 40.09' PH WOB 22, MW 11.7 VIS 38 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 245-155-189 PSI ON/OFF 2800-2400, TOR 12-10 K ROT= 11 HRS 441' @ 40.09' PH 20' CONN GAS FLAIR
		- 11:30	0.50	DRLPRO	07	Α	P		RIG SERVICE
	11:30	~ 15:30	4.00	DRLPRO	02	D	Р		DRLG F/ 9283' TO 9350' 67' @ 16.75' PH WOB 22, MW 12.1 VIS 41 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 245-155-189 PSI ON/OFF 2800-2400, TOR 12-10 K ROT= 4 HRS 67' @ 16.75' PH RAISE MW FOR TRIP OUT TO 12.1

# **Operation Summary Report**

 Well: NBU 921-35N4BS (YELLOW)
 Spud Conductor: 2/1/2011
 Spud Date: 2/18/2011

 Project: UTAH-UINTAH
 Site: NBU 921-35O PAD
 Rig Name No: PROPETRO 12/12, PIONEER 54/54

 Event: DRILLING
 Start Date: 3/18/2011
 End Date: 3/24/2011

Active Datum: RKB @5,119.00ft (above Mean Sea UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0

evel)								
Date	100 100 100 100 100 100 100 100 100 100	ime rt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
		- 21:00	5.50	DRLPRO	06	Α	Р	POOH TO CHANGE BIT AND MOTOR (ROP) L/D MOTOR TIGHT @ 4800'
	21:00	- 0:00	3.00	DRLPRO	06	Α	Р	PICK UP MOTOR M/U BIT SCRIBE MWD RIH\ REAM F/ 4600' TO 4900'
3/23/2011	0:00	- 1:30	1.50	DRLPRO	06	Α	Р	RIH WASH 90' TO BOTTOM NO FILL
	1:30	- 12:30	11.00	DRLPRO	02	D	P	DRLG F/ 9350' TO 9910' 560' @ 16.75' PH WOB 22, MW 12.2 VIS 41 RPM 60, MM 104, SPM 120, GPM 454, PU/SO/ROT 250-150-190 PSI ON/OFF 2800-2400, TOR 13-12 K ROT= 9.66 HRS 527' @ 54.55' PH SLIDE=1.34 33' @ 7.34' PH LOST 60 BBL MUD
	12:30	- 14:30	2.00	DRLPRO	05	С	P	PUMP HIGH VISC SWEEP CIRC HOLE CLEAN
		- 19:00	4.50	DRLPRO	06	E	P	WIPER TRIP UP TO 4000' WASH 50' TO BOTTOM NO FILL
		- 21:00	2.00	DRLPRO	05	F	P	PUMP HIGH VISC SWEEP CIRC HOLE CLEAN 20' FLAIR BOTTOMS UP
		- 0:00	3.00	DRLPRO	06	В	₽	POOH FOR O-HOLE LOGS
3/24/2011		- 0:30	0.50	DRLPRO	06	В	Р	POOH FOR LOG'S L/D MOTOR
		- 4:30	4.00	DRLPRO	11	D	P	RIG UP AND RUN O-HOLE LOGS TD-7310
		- 5:00	0.50	DRLPRO	14	В	Р	PULL W/BUSHING
		- 6:00	1.00	DRLPRO	12	Α	Р	RIG UP CSG EQUIP
		- 13:30	7.50	DRLPRO	12	С	Р	RUN 5 JTS P-110 (213')- 229 JTS 2 MARKERS 4.5" 11.6# I-80 BUTT CSG SHOE @ 9895' F/C @ 9852' MARKER @ 7618' MARKER @ 4944' TOTAL 236 JTS
		- 14:30	1.00	DRLPRO	05	D	Р	CIRC PRIOR TO CEMENT JOB
		- 15:00	0.50	DRLPRO	12	В	Р	RIG UP BJ CEMENTERS
	15:00	- 17:30	2.50	DRLPRO	12	E	Р	606 SKS LEAD 12.4- 1268 SKS TAIL14.3 153 BBL DISPLACMENT PLUG DOWN @ 17:30 BUMPED 3210 PSI HELD 3 MIN 2 BBL BACK LIFT PSI 2600 PLUG HELD
	17:30	- 18:00	0.50	DRLPRO	14	В	Р	SET SLIPS 110K- LIFT BOP- CUT CSG

7/15/2011

				US	ROC	KIES RE	GION	
			0	perat	ion S	umma	ry Repor	
Well: NBU 921	-35N4BS (YELLC	OW)	Spud Co	onductor	: 2/1/20	11	Spud Date: 2/	18/2011
Project: UTAH	-UINTAH		Site: NB	U 921-3	50 PAD	1		Rig Name No: PROPETRO 12/12, PIONEER 54/54
Event: DRILLII	NG		Start Da	te: 3/18/	2011			End Date: 3/24/2011
Active Datum: Level)	RKB @5,119.00ft (	above Mear	n Sea	UWI: S	SW/SE/0	/9/S/21/E/3	85/0/0/6/PM/S/	388.00/E/0/1,770.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	18:00 - 21:30	3.50	DRLPRO	14	A	P		N/D BOPE CLEAN PITS RELEASE RIG 21:30 3/24/11 PRODUCTION: Rig Move/Skid start date/time: 3/18/2011 12:00 Rig Move/Skid finish date/time: 3/18/2011 13:00 Total MOVE hours: 1.0 Prod Rig Spud date/time: 3/18/2011 21:30 Rig Release date/time: 3/24/2011 21:30 Total SPUD to RR hours: 144.0 Planned depth MD 9,903 Planned depth TVD 9,685 Actual MD: 9,910 Actual TVD: 9,691 Open Wells \$: AFE \$: Open wells \$/ft:  PRODUCTION HOLE: Prod. From depth: 2,543 Prod. To depth: 9,910 Total PROD hours: 99 Log Depth: 7310 Float Collar Top Depth: 9852 Production Casing size: 4 1/2 # of casing joints ran: 236 Casing set MD: 9,895.0 Stage 1 # sx of cement: LEAD=606, TAIL=1268 Cement density (ppg:) 12.4-14.3 Cement yield (ft3/sk): 2.03-1.31 Stage 2 # sx of cement: Cement density (ppg:) Cement yield (ft3/sk): Top Out Cmt # sx of cement: Cement density (ppg:) Cement yield (ft3/sk): Est. TOC (Lead & Tail) or 2 Stage : Describe cement issues: Describe cement issues: Describe hole issues:  DIRECTIONAL INFO: KOP: 249 Max angle: 22.45 Departure: 270.00 Max dogleg MD: 2.59-2045'

7/15/2011 3:42:08PM 5

### 1 General

#### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

#### 1.2 Well Information

Well	NBU 921-35N4BS (YELLOW)		
Common Name	NBU 921-35N4BS		
Well Name	NBU 921-35N4BS	Wellbore No.	OH
Report No.	1	Report Date	6/13/2011
Project	UTAH-UINTAH	Site	NBU 921-35O PAD
Rig Name/No.		Event	COMPLETION
Start Date	6/13/2011	End Date	6/22/2011
Spud Date	2/18/2011	Active Datum	RKB @5,119.00ft (above Mean Sea Level)
UWI	SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0		

#### 1.3 General

Contractor	CUTTERS WIRELINE	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

#### 1.4 Initial Conditions

#### 1.5 Summary

Fluid Type		Fluid Density	Gross Inte	erval	5,869.0 (ft)-9,658.0 (ft)	Start Date/Time	6/13/2011	12:00AM
Surface Press		Estimate Res Press	No. of Inte	ervals	24	End Date/Time	6/13/2011	12:00AM
TVD Fluid Top		Fluid Head	Total Shot	ts	163	Net Perforation Interval		47.00 (ft)
Hydrostatic Press		Press Difference	Avg Shot	Density	3.47 (shot/ft)	Final Surface Pressure		
Balance Cond	NEUTRAL					Final Press Date		

#### 2 Intervals

#### 2.1 Perforated Interval

Date Formation/ C	CL@ CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Carr Type /Carr Manuf	Carr	Phasing	Charge Desc /Charge	Charge	Reason	Misrun
Reservoir	(ft) S	(ft)		-77.65 JULY (1971)	Add. Shot			Size	(°)	Manufacturer	Weight		
12:00AMWASATCH/	(ft)	5,869.0	5.872.0	(shot/ft) 4.00		(in) 0.360	FXP/	(in) 3.375	90.00	현실이 남이다는 말로보는 이글론에 되 1	(gram) 23.00	PRODUCTIO	
	1 5	0,000.0	0,012.0			0.000	-/	0.070	00.00	1	20.00	N	1

#### 2.1 Perforated Interval (Continued)

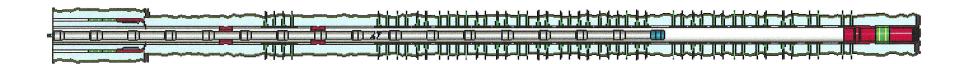
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S	MD Top (ft)			Misfires/ Add. Shot	r	Carr Type /Carr Manuf	Carr Size	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight	Reason	Misrun
12:00AM	WASATCH/		(ft)	5,880.0	5,884.0	(shot/ft) 3.00		(in) 0.360	EXP/	(in) 3.375	120.00		(gram) 23.00	PRODUCTIO	
12:00AM	MESAVERDE/			7,978.0	7,980.0	4.00	a statement of the state of	0.360	FXP/	3.375	90.00		23.00	N PRODUCTIO	
				l i						e es a cesa son de		e en		N	
12:00AM	MESAVERDE/	mycer or more	Total Control	8,026.0	8,028.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	a - Androne
12:00AM	MESAVERDE/			8,108.0	8,110.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM	MESAVERDE/		<u> </u>	8,263.0	8,265.0	4.00		0.360	EXP/	3.375	90.00	and the second second second	23.00	PRODUCTIO	
12:00AM	MESAVERDE/		1	8,280.0	8,282.0	4.00	*** * ****	0.360	EXP/	3.375	90.00	e nem cresc in section of the contract of the	23.00	N PRODUCTIO	
12:00AM	MESAVERDE/			8,344.0	8,346.0	4.00		0.360	EXP/	3.375	90.00	· · · · · · · · · · · · · · · · · · ·	23.00	N PRODUCTIO	1
							ena esa per a l'esant l'el							N	
12:00AM	MESAVERDE/		*	8,444.0	8,446.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/	1	*	8,569.0	8,571.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	
12:00AM	MESAVERDE/			8,642.0	8,644.0	4.00		0.360	EXP/	3.375	90.00	e en	23.00	PRODUCTIO	
12:00AM	MESAVERDE/		1-2-1	8,814.0	8,815.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	on the tast we
12:00AM	MESAVERDE/		The second second	8,840.0	8,841.0	3.00	tage the control of the control	0.360	EXP/	3.375	120.00	in the community of the control of t	23.00	PRODUCTIO	
12:00AM	MESAVERDE/			8,944.0	8,946.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM	MESAVERDE/			8,973.0	8,975.0	3.00		0.360	EXP/	3.375	120.00	\$\frac{1}{2} \cdot \frac{1}{2}	23.00	PRODUCTIO	20 5.00 p. 10 m
12:00AM	MESAVERDE/			9,042.0	9,044.0	3.00	v .s. v =	0.360	EXP/	3.375	120.00			PRODUCTIO N	* 20 * 1 \ \ \
12:00AM	MESAVERDE/			9,112.0	9,113.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AMI	MESAVERDE/		\$	9,137.0	9,138.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	the community of
12:00AM	MESAVERDE/		torio de la compansión de La compansión de la compa	9,180.0	9,182.0	3.00		0.360	EXP/	3.375	120.00		and the second of the second	PRODUCTIO	* 1 · · · · · · · · · · · · · · · · · ·
12:00AMI	MESAVERDE/		A	9,216.0	9,218.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO	
12:00AMI	MESAVERDE/			9,278.0	9,280.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AMI	MESAVERDE/			9,378.0	9,379.0	4.00		0.360	EXP/	3.375	90.00	A CONTRACTOR OF THE CONTRACTOR	23.00	PRODUCTIO N	

#### 2.1 Perforated Interval (Continued)

Date	Formation/	CCL@	CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Carr Type /Carr Manuf	Carr	Phasing	Charge Desc /Charge	Charge	Reason	Misrun
	Reservoir	(ft)	S	(ft)	(ft)	Density	Add. Shot	r		Size	(°)	Manufacturer	Weight		
			(ft)			(shot/ft)		(in)		(in)			(gram)		
12:00AN	MESAVERDE/	Security and the security of t	one and the contract of the co	9,480.0	9,482.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	A Control of the Cont
12:00AN	MESAVERDE/			9,655.0	9,658.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	entitlete frest sinnestime

#### 3 Plots

#### 3.1 Wellbore Schematic



	0				≣GION ary Report
Well: NBU 921-35N4BS (YELLOW)	Spud Co	onductor	: 2/1/201	1	Spud Date: 2/18/2011
Project: UTAH-UINTAH	Site: NB	U 921-3	50 PAD		Rig Name No: MILES 3/3
Event: COMPLETION	Start Da	te: 6/13/	2011		End Date: 6/22/2011
Active Datum: RKB @5,119.00ft (above Mean Level)	Sea	UWI: S	W/SE/0/	9/S/21/E	35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0
Date Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
6/10/2011 7:00 - 15:00 8.00	COMP	33	С	Р	FILL SURFACE CSG. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 12 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 31 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 87 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 44 PSI. BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFWE.

# Operation Summary Report

Vell: NBU 921-	Well: NBU 921-35N4BS (YELLOW) Project: UTAH-UINTAH			onductor	. 2/ 1/201	•	opua bato. z	/18/2011		
Project: UTAH-	UINTAH		Site: NE	SU 921-3	50 PAD			Rig Name No: MILES 3/3		
Event: COMPL	ETION		Start Da	ite: 6/13/	2011		The state of the s	End Date: 6/22/2011		
Active Datum: F .evel)	RKB @5,119.00ft (a	bove Mean	Sea	UWI: S	W/SE/0/9	9/S/21/E/	35/0/0/6/PM/S/	388.00/E/0/1,770.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
6/13/2011	8:30 - 18:00	9.50	COMP	36	В	Р		PERF STG 1)PU PU & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH' P/U PERF AS PER STG 1 PERF DESIGN. POOH.		
,								FRAC STG 1)WHP 711 PSI, BRK 3600 PSI @ 4.6 BPM. ISIP 2827 PSI, FG .74. PUMP 100 BBLS @ 38.2 BPM @ 5924 PSI = 71% HOLES OPEN. ISIP 2947 PSI, FG .75, NPI 120 PSI.		
								MP 6608 PSI, MR 44.2 BPM, AP 5965 PSI, AR 36.5 BPM, PMP 789 BBLS SW & 8486 LBS OF 30/50 SND & 2458 LBS OF 20/40 RESIN SND. TOTAL PROP 10,944 LBS X-OVER TO PERF CREW		
								PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9320' P/U PERF AS PER PERF DESIGN. POOHX-OVER TO FRAC CREW		
								FRAC STG 2)WHP 1520 PSI, BRK 4691 PSI @ 6.0 BPM. ISIP 2978 PSI, FG .76. PUMP 100 BBLS @ 36.6 BPM @ 5610 PSI = 66% HOLES OPEN.		
								ISIP 2894 PSI, FG .75, NPI -84 PSI. MP 6566 PSI, MR 48.1 BPM, AP 5956 PSI, AR 45.7 BPM,		
								PMP 698 BBLS SW & 9489 LBS OF 30/50 SND & 2571 LBS OF 20/40 RESIN SND. TOTAL PROP 12,060 LBS SWI X-OVER TO WIRE LINE		
								PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9074' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC CREW		
								FRAC STG 3)WHP 835 PSI, BRK 2607 PSI @ 6.0 BPM. ISIP 2110 PSI, FG .68. PUMP 100 BBLS @ 40.2 BPM @ 5296 PSI = 64% HOLES OPEN.		
								ISIP 2590 PSI, FG .73, NPI 480 PSI. MP 6308 PSI, MR 51 BPM, AP 5570 PSI, AR 49.2 BPM,		
								PMP 830 BBLS SW & 12,993 LBS OF 30/50 SND 8 2117 LBS OF 20/40 RESIN SND. TOTAL PROP 15,110 LBS,SWI X-OVER TO WL		
								PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8694' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC		
								FRAC STG 4)WHP 625 PSI, BRK 3990 PSI @ 4.7 BPM. ISIP 2931 PSI, FG .78 PUMP 100 BBLS @ 27.3 BPM @ 5742 PSI = 60% HOLES OPEN. ISIP 2926 PSI, FG .78, NPI -5 PSI.		
								MP 6502 PSI, MR 47.1 BPM, AP 5872 PSI, AR 38.8 BPM, PMP 681 BBLS SW & 8683 LBS OF 30/50 SND &		

PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP

# **Operation Summary Report**

				Spud C				Spud Date: 2/			
roject: UTAH	I-UINTAH	<del>1</del>		Site: NB	SU 921-3	50 PAD			Rig Name No: MILES 3/3		
vent: COMPI	~				te: 6/13/				End Date: 6/22/2011		
Active Datum: .evel)	RKB @	5,119.00ft (a	bove Mear	Sea	UWI: S	SW/SE/0/	9/S/21/E/	35/0/0/6/PM/S/	6/388.00/E/0/1,770.00/0/0		
Date	2011 11 11 11 11 11	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
									GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8694' P/U PERF AS PER STG 5 PERF DESIGN. POOH. SWIFN.		
6/14/2011		- 7:00	0.25	COMP	48		Р		HSM. HIGH PSI LINES. WIRE LINE AWARENESS.		
	7:00	- 18:00	11.00	COMP	36	В	Р		FRAC STG 5)WHP 1634 PSI, BRK 2634 PSI @ 4.6 BPM. ISIP 2052 PSI, FG .69. PUMP 100 BBLS @ 48.5 BPM @ 6014 PSI = 69% HOLES OPEN.		
									ISIP 2818 PSI, FG .78, NPI 766 PSI. MP 6505 PSI, MR 50.8 BPM, AP 5505 PSI, AR 49.3 BPM,		
									PMP 1398 BBLS SW & 26,316 LBS OF 30/50 SND 2586 LBS OF 20/40 RESIN SND. TOTAL PROP 28,902 LBS.SWI X-OVER TO WL		
									PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8160' P/U PERF AS PER DESIGN POOH.X-OVER TO FRAC CREW		
									FRAC STG 6)WHP 440 PSI, BRK 2727 PSI @ 5-0 BPM. ISIP 1944 PSI, FG .68. PUMP 100 BBLS @ 47.3 BPM @ 5808 PSI = 67%		
									HOLES OPEN. ISIP 2330 PSI, FG .73, NPI 380 PSI. MP 6349 PSI, MR 50.5 BPM, AP 5802 PSI, AR 49.7 BPM.		
									PMP 645 BBLS SW & 8905 LBS OF 30/50 SND & 2549 LBS OF 20/40 RESIN SND. TOTAL PROP 11,454 LBS.SWI X-OVER TO WL		
									PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 5934' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC CREW		
									FRAC STG 7)WHP 160 PSI, BRK 755 PSI @ 4.8 BPM. ISIP 387 PSI, FG .50. FG VERY LOW. CALL ZACH GARRITY. DID NOT FRAC STG 7 DUE T/ VERY LOW FG.		
									PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 5819'. POOH. SWI. DONE FRACING THIS WELL.		
									TOTAL SAND = 89,556 LBS TOTAL CLFL = 4954 BBLS TOTAL SCALE = 576 GAL TOTAL BIO = 101 GAL		
6/21/2011	11:00	- 13:00	2.00	COMP	30	Α	Р		RDSU. MOVE OVER. RUSU. ND WH. NU BOP. RUFLOOR AND TBG EQUIP. SPOT TBG.		
	13:00	- 17:00	4.00	COMP	31	I	Р		MU 3-7/8" BIT, POBS, 1.87" XN. RIH AS MEAS AN PU 2-3/8" L-80 TBG. PU 150-JTS, EOT AT 4725'. SDFN.		
6/22/2011	6:45	- 7:00	0.25	COMP	48		Р		HSM. HIGH PSI LINES.		

7/15/2011

# **Operation Summary Report**

Well: NBU 921	-35N4BS (YELL	.000)	Spud C	onductor	. 21 1120 1	· · · · · · · · · · · · · · · · · · ·	Spud Date: 2/18				
Project: UTAH-	-UINTAH		Site: NE	3U 921-3	50 PAD			Rig Name No: MILES 3/3			
Event: COMPL	ETION		Start Da	ate: 6/13/				End Date: 6/22/2011			
Active Datum:   Level)	RKB @5,119.00ff	(above Mean	Sea	UWI: S	W/SE/0/	9/S/21/E	21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation			
	7:00 - 18:00		COMP	44	C	P		OPEN WELL 0 PSI.  CONT PU 2 3/8 L-80 TBG. TAG SAND @ 5820' RU  DRL EQUIP. TEST BOP'S T/ 3000 PSI. GOOD  TEST. BLEED OFF PSI. BRK CONV CIRC. BEG  DRL OUT.  1ST CBP)TAG SAND @ 5820' = 15' SAND. DRL  OUT CBP @ 5835' IN 7 MIN. 0 PSI INCR. CONT  RIH.  2ND CBP)TAG SAND @ 5920' = 5' SAND. DRL OUT  CBP @ 5925' IN 4 MIN, 0 PSI INCR. CONT RIH.  3RD CBP)TAG SAND @ 8120' =25' SAND. DRL  OUT CBP @ 8145' IN 7 MIN. 700 PSI INCR. CONT  RIH.  4TH CBP)TAG SAND @ 8345' = 35' SAND. DRL  OUT CBP @ 8380' IN 5 MIN. 250 PSI INCR. CONT  RIH.  5TH CBP)TAG SAND @ 8640' = 40' SAND. DRL  OUT CBP @ 8680' IN 5 MIN. 200 PSI INCR. CONT  RIH.  6TH CBP)TAG SAND @ 9044' = 30' SAND. DRL  OUT CBP @ 9074' IN 2 MIN. 200 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 4 MIN. 300 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 4 MIN. 300 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 2 MIN. 200 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 2 MIN. 200 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 2 MIN. 300 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 2 MIN. 200 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 2 MIN. 300 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT  CBP @ 9310' IN 4 MIN. 300 PSI INCR. CONT  RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL  OUT CBP @ 90781 IN 2 MIN. 200 PSI INCR.  CONT  RIH.  7TH CBP)TAG SAND @ 9580' =30' SAND. DRL  OUT CBP @ 90781 IN 2 MIN. 200 PSI INCR.  CONT  RIH.  7TH CBP)TAG SAND @ 90568'.  AND BOP, NUWH. DROP BALL. PUMP BIT OFF W/  20 BBLS. SWI FOR 30 MIN T/ LET BIT FALL T/  PBTD. OPEN WELL T/ PIT. UNLOAD TBG. TURN  WELL OVER T/ FBC.			
	13:45 - 13:45	0.00	PROD	50				WELL OVER T/ FBC. RD RIG. SLIDE OVER T/ NEXT WELL. ( 35N4CS, GREEN WELL.) RU RIG. PREP & TALLY NEW 2 3/8 L-80 TBG. WELL TURNED TO SALES @ 1345 HR ON 6/22/11 1000 MCFD, 1920 BWPD, CP 1850#, FTP 1550#,			
6/23/2011	7:00 -			33	Α			CK 20/64" 7 AM FLBK REPORT: CP 2300#, TP 1600#, 20/64" CK, 45 BWPH, HVY SAND, - GAS TTL BBLS RECOVERED: 1956			
6/24/2011	7:00 -			33	Α			BBLS LEFT TO RECOVER: 2998 7 AM FLBK REPORT: CP 2150#, TP 1400#, 20/64" CK, 35 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 2872 BBLS LEFT TO RECOVER: 2082			
6/25/2011	7:00 -			33	Α			CK, 26 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3593 BBLS LEFT TO RECOVER: 1361			
6/26/2011	7:00 -			33	Α			7 AM FLBK REPORT: CP 2000#, TP 1150#, 20/64" CK, 18 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4113			

7/15/2011

3:43:23PM



Site: UINTAH\_NBU 921-350 PAD

Well: NBU 921-35N4BS Wellbore: NBU 921-35N4BS Design: NBU 921-35N4BS



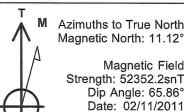
Model: IGRF2010

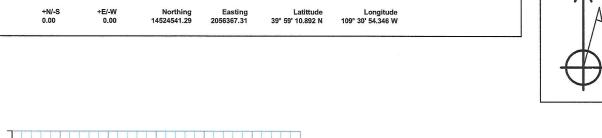
WELL DETAILS: NBU 921-35N4BS

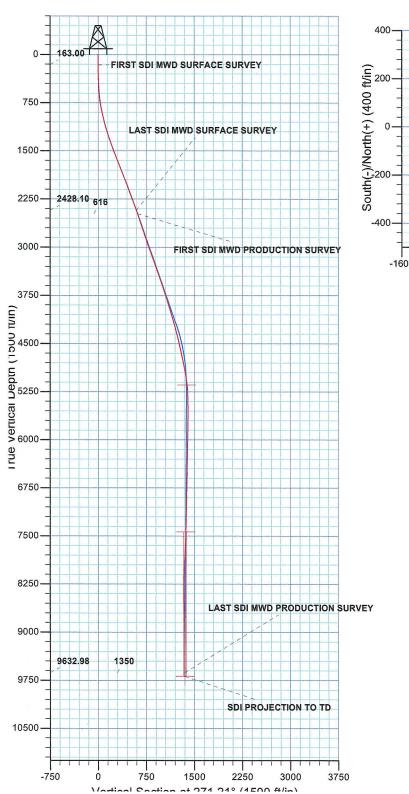
GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

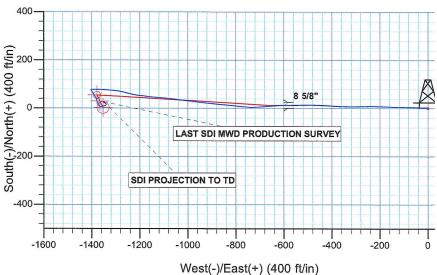
+N/-S +E/-W Northing Easting Latittude Longitude

0.00 0.00 14524541.29 2056367.31 39° 59' 10.892 N 109° 30' 54.346 W









#### PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)

Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 35 T9S R21E
System Datum: Mean Sea Level

Design: NBU 921-35N4BS (NBU 921-35N4BS/NBU 921-35N4BS)

Created Din Daharteaste Data: 44-E0 March 20 2044



# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-35O PAD NBU 921-35N4BS

**NBU 921-35N4BS** 

Design: NBU 921-35N4BS

# **Standard Survey Report**

29 March, 2011







Company: Project:

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site

UINTAH\_NBU 921-350 PAD

Well:

NBU 921-35N4BS

Wellbore:

NBU 921-35N4BS

Design:

NBU 921-35N4BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** Database:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

Minimum Curvature

EDM5000-RobertS-Local

**Project** 

UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Map Zone:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

UINTAH\_NBU 921-350 PAD, SECTION 35 T9S R21E

Site Position:

Northing:

14,524,559.98 usft

Latitude:

39° 59' 11.076 N

From:

Lat/Long

Easting:

2.056.374.00 usft

Longitude:

**Position Uncertainty:** 

0.00 ft

Slot Radius:

13.200 in

**Grid Convergence:** 

109° 30' 54.256 W

0.95°

Well NBU 921-35N4BS, 388 FSL 1770 FEL

**Well Position** 

+N/-S

0.00 ft

Northing:

14,524,541.29 usft

Latitude:

39° 59' 10.892 N

+E/-W 0.00 ft Easting: 2,056,367.31 usft Longitude: 0.00 ft ft Ground Level:

**Position Uncertainty** 

Wellhead Elevation:

109° 30' 54.346 W

5,100.00 ft

Wellbore

NBU 921-35N4BS

**Magnetics** 

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

271.21

IGRF2010

02/11/2011

0.00

11.12

65.86

52,352

Design

NBU 921-35N4BS

Audit Notes:

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

Vertical Section:

Depth From (TVD)

+N/-S

+E/-W

(ft)

(ft)

(ft)

Direction (°)

0.00 0.00

Survey Program

(ft)

Date 03/29/2011

From

To

(ft) Survey (Wellbore) **Tool Name** 

Description

15.00 2,582.00 2,525.00 Survey #1 SDI MWD SURFACE (NBU 921 9,910.00 Survey #2 SDI MWD PRODUCTION (NBU

SDI MWD SDI MWD SDI MWD - Standard ver 1.0.1 SDI MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
163.00	0.55	18.80	163.00	0.67	0.23	-0.21	0.37	0.37	0.00
FIRST SDI M	IWD SURFACE S	SURVEY							
249.00	1.08	320.96	248.99	1.69	-0.15	0.18	1.06	0.62	-67.26
334.00	1.47	287,39	333.97	2.64	-1.69	1.75	0.97	0.46	-39.49
425.00	2.61	267.61	424.91	2.90	-4.88	4.94	1.45	1.25	-21.74
515.00	3.94	270.85	514.76	2.86	-10.02	10.08	1.49	1.48	3.60
605.00	5.39	272.15	604.46	3.07	-17.33	17.39	1.62	1.61	1.44
695.00	7.24	270.99	693.91	3.32	-27.23	27.29	2.06	2.06	-1.29





Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: UINTAH\_NBU 921-350 PAD NBU 921-35N4BS

Wellbore:

NBU 921-35N4BS

Design: NBU 921-35N4BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

True

Minimum Curvature

jn: N	NBU 921-35N4BS			Database:			EDM5000-RobertS-Local			
∍y										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
785.00	9.23	272.25	782.98	3.71	-40.11	40.18	2.22	2.21	1.40	
875.00		270.31	871.58	4.04	-55.89	55.96	1.97	1.93	-2.16	
965.00		270.75	959.63	4.21	-74.52	74.59	2.18	2.18	0.49	
1,055.00		271.16	1,047.05	4.57	-95.88	95.95	1.78	1.78	0.46	
1,145.00		271.71	1,133.86	5.17	-119.60	119.69	1.70	1.69	0.61	
1,235.00	) 17.49	272.57	1,220.03	6.15	-145.55	145.65	1.62	1.60	0.96	
1,325.00	19.13	272.45	1,305.48	7.39	-173.80	173.92	1.82	1.82	-0.13	
1,415.00	19.25	270.57	1,390.48	8.17	-203.37	203.49	0.70	0.13	-2.09	
1,505.00	20.18	270.46	1,475.20	8.44	-233.73	233.85	1.03	1.03	-0.12	
1,595.00	21.11	268.48	1,559.42	8.13	-265.45	265.57	1.29	1.03	-2.20	
1,685.00	22.09	268.90	1,643.10	7.38	-298.58	298.66	1.10	1.09	0.47	
1,775.00		270.89	1,726.67	7.31	-331.99	332.07	1.05	-0.66	2.21	
1,865.00	21.05	272.44	1,810.53	8.25	-364.63	364.72	0.80	-0.50	1.72	
1,955.00	21.19	273.66	1,894.49	9.98	-397.01	397.13	0.51	0.16	1.36	
2,045.00	22.45	272.83	1,978.04	11.87	-430.40	430.56	1. <b>44</b>	1.40	-0.92	
2,135.00	20.15	271.74	2,061.88	13.19	-463.07	463.24	2.59	-2.56	-1.21	
2,225.00	20.13	269.88	2,146.38	13.63	-494.05	494.23	0.71	-0.02	-2.07	
2,315.00	20.14	268.35	2,230.88	13.15	-525.02	525.18	0.59	0.01	-1.70	
2,405.00	20.28	270.28	2,315.34	12.78	-556.11	556.25	0.76	0.16	2.14	
2,495.00	19.96	269.45	2,399.85	12.71	-587.07	587.20	0.48	-0.36	-0.92	
2,525.00	19.34	268.92	2,428.10	12.56	-597.15	597.29	2.15	-2.07	-1.77	
LAST SDI	MWD SURFACE S	URVEY	·							
2,582.00	18.87	267.28	2,481.96	11.95	-615.80	615.91	1.25	-0.82	-2.88	
FIRST SDI	MWD PRODUCTIO	ON SURVEY								
2,677.00	18.94	266.30	2,571.84	10,22	-646.53	646.60	0.34	0.07	-1.03	
2,771.00	18.30	263.41	2,660.92	7.55	-676.41	676.42	1.19	-0.68	-3.07	
2,866.00	18.42	266.17	2,751.09	4.83	-706.21	706.15	0.92	0.13	2.91	
2,961.00	17.97	271.96	2,841.34	4.33	-735.83	735.76	1.96	-0.47	6.09	
3,056.00	19.39	274.58	2,931.34	6.09	-766.20	766.16	1.74	1.49	2.76	
3,151.00	20.13	275.91	3,020.74	9.03	-798.18	798.19	0.91	0.78	1.40	
3,246.00	20.68	276.37	3,109.78	12.58	-831.11	831.19	0.60	0.58	0.48	
3,341.00		275.39	3,198.83	15.97	-864.03	864.18	0.71	-0.61	-1.03	
3,436.00	19.67	275.55	3,288.17	19.05	-896.20	896.40	0.46	-0.45	0.17	
3,531.00	19.09	275.62	3,377.78	22.12	-927.57	927.83	0.61	-0.61	0.07	
3,531.00 3,625.00		275.62 276.38	3,377.78 3,466.79		-927.57 -957.63	927.83 957.95	0.61 0.76	-0.61 -0.71	0.07 0.81	
	18.42			25.27	-957.63	957.95	0.76	-0.71	0.81	
3,625.00	18.42 19.11	276.38 276.51	3,466.79 3,556.74	25.27 28.71	-957.63 -988.00	957.95 988.38	0.76 0.73	-0.71 0.73	0.81 0.14	
3,625.00 3,720.00	18.42 19.11 18.93	276.38	3,466.79	25.27	-957.63	957.95	0.76	-0.71	0.81	
3,625.00 3,720.00 3,815.00	18.42 19.11 18.93 18.05	276.38 276.51 277.08 278.47	3,466.79 3,556.74 3,646.55 3,736.65	25.27 28.71 32.37 36.44	-957.63 -988.00 -1,018.74 -1,048.59	957.95 988.38 1,019.19 1,049.12	0.76 0.73 0.27 1.04	-0.71 0.73 -0.19 -0.93	0.81 0.14 0.60 1.46	
3,625.00 3,720.00 3,815.00 3,910.00	18.42 19.11 18.93 18.05	276.38 276.51 277.08 278.47 275.89	3,466.79 3,556.74 3,646.55 3,736.65	25.27 28.71 32.37 36.44 40.11	-957.63 -988.00 -1,018.74 -1,048.59 -1,077.69	957.95 988.38 1,019.19 1,049.12	0.76 0.73 0.27 1.04	-0.71 0.73 -0.19 -0.93	0.81 0.14 0.60 1.46	
3,625.00 3,720.00 3,815.00 3,910.00 4,006.00 4,100.00	18.42 19.11 18.93 18.05 17.54 16.75	276.38 276.51 277.08 278.47 275.89 275.29	3,466.79 3,556.74 3,646.55 3,736.65 3,828.06 3,917.88	25.27 28.71 32.37 36.44 40.11 42.81	-957.63 -988.00 -1,018.74 -1,048.59 -1,077.69 -1,105.27	957.95 988.38 1,019.19 1,049.12 1,078.29 1,105.92	0.76 0.73 0.27 1.04 0.98 0.86	-0.71 0.73 -0.19 -0.93 -0.53 -0.84	0.81 0.14 0.60 1.46 -2.69 -0.64	
3,625.00 3,720.00 3,815.00 3,910.00	18.42 19.11 18.93 18.05 17.54 16.75 16.37	276.38 276.51 277.08 278.47 275.89	3,466.79 3,556.74 3,646.55 3,736.65	25.27 28.71 32.37 36.44 40.11	-957.63 -988.00 -1,018.74 -1,048.59 -1,077.69	957.95 988.38 1,019.19 1,049.12	0.76 0.73 0.27 1.04	-0.71 0.73 -0.19 -0.93	0.81 0.14 0.60 1.46	





Company: Project:

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site: Well: UINTAH\_NBU 921-350 PAD

NBU 921-35N4BS NBU 921-35N4BS Wellbore: Design:

NBU 921-35N4BS

Local Co-ordinate Reference:

**Survey Calculation Method:** 

TVD Reference:

MD Reference:

North Reference:

Database:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

Minimum Curvature

Survey										
	leasured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
	4,481.00	14.73	277.84	4,283.89	54.18	-1,210.41	1,211.28	1.33	-1.33	0.35
	4,576.00	14.12	283.55	4,375.90	58.54	-1,233.64	1,234.60	1,63	-0.64	6.01
	4,671.00	14.40	284.36	4,467.97	64.18	-1,256.35	1,257.42	0.36	0.29	0.85
	4,766.00	12.83	282.17	4,560.30	69.34	-1,278.10	1,279.28	1.74	-1.65	-2.31
	4,861.00	12.07	275.25	4,653.07	72.47	-1,298.31	1,299.54	1.76	-0.80	-7.28
	4,956.00	11.67	275.88	4,746.04	74.36	-1,317.76	1,319.03	0.44	-0.42	0.66
	5,051.00	11.37	274.95	4,839.13	76.16	-1,336.64	1,337.95	0.37	-0.32	-0.98
	5,145.00	10.14	273.52	4,931.47	77.46	-1,354.13	1,355.46	1.34	-1.31	-1.52
	5,240.00	8.83	270.91	5,025.17	78.09	-1,369.77	1,371.11	1.45	-1.38	-2.75
	5,335.00	6.80	270.56	5,119.29	78.26	-1,382.69	1,384.03	2.14	-2.14	-0.37
	5,430.00	4.92	266.86	5,213.79	78.09	-1,392.38	1,393.71	2.02	-1.98	-3.89
	5,524.00	3.04	266.92	5,307.55	77.74	-1,398.89	1,400.22	2.00	-2.00	0.06
	5,619.00	1.59	238.36	5,402.48	76.91	-1,402.53	1,403.84	1.91	-1.53	-30.06
	5,714.00	1.31	135.69	5,497.46	75.44	-1,402.89	1,404.17	2.39	-0.29	-108.07
	5,809.00	1.04	138.10	5,592.44	74.03	-1,401.56	1,402.81	0.29	-0.28	2.54
	5,904.00	0.94	150.80	5,687.42	72.70	-1,400.60	1,401.82	0.25	-0.11	13.37
	5,998.00	1.01	147.15	5,781.41	71.33	-1,399.78	1,400.97	0.10	0.07	-3.88
	6,093.00	1.19	152.20	5,876.39	69.76	-1,398.86	1,400.02	0.22	0.19	5.32
	6,188.00	1.17	150.38	5,971.37	68.04	-1,397.93	1,399.05	0.04	-0.02	-1.92
	6,283.00	2.31	143.48	6,066.33	65.66	-1,396.31	1,397.38	1.22	1.20	-7.26
	6,378.00	2.22	140.06	6,161.25	62.71	-1,393.99	1,395.00	0.17	-0.09	-3.60
	6,473.00	2.18	145.36	6,256.18	59.81	-1,391.78	1,392.73	0.22	-0.04	5.58
	6,568.00	2.29	147.11	6,351.11	56.73	-1,389.72	1,390.61	0.14	0.12	1.84
	6,663.00	2.20	151.27	6,446.04	53.54	-1,387.81	1,388.63	0.20	-0.09	4.38
	6,757.00	2.35	151.20	6,539.96	50.27	-1,386.02	1,386.77	0.16	0.16	-0.07
	6,852.00	2.38	151.90	6,634.88	46.82	-1,384.15	1,384.83	0.04	0.03	0.74
	6,947.00	2.45	153.23	6,729.80	43.27	-1,382.31	1,382.91	0.09	0.07	1.40
	7,041.00	2.76	164.00	6,823.70	39.30	-1,380.78	1,381.30	0.61	0.33	11.46
	7,137.00	2.76	161.86	6,919.59	34.88	-1,379.42	1,379.85	0.11	0.00	-2.23
	7,232.00	3.01	161.14	7,014.47	30.35	-1,377.90	1,378.24	0.27	0.26	-0.76
	7,327.00	2.94	157.94	7,109.34	25.73	-1,376.18	1,376.42	0.19	-0.07	-3.37
	7,423.00	2.99	159.90	7,205.21	21.10	-1,374.40	1,374.54	0.12	0.05	2.04
	7,518.00	3.01	158.75	7,300.08	16.45	-1,372.64	1,372.68	0.07	0.02	-1.21
	7,613.00	2.88	154.25	7,394.96	11.97	-1,370.70	1,370.65	0.28	-0.14	-4.74
	7,708.00	2.72	129.27	7,489.85	8.40	-1,367.92	1,367.79	1.28	-0.17	-26.29
	7,803.00	2.62	95.06	7,584.75	6.78	-1,364.01	1,363.85	1.66	-0.11	-36.01
	7,898.00	2.65	83.94	7,679.65	6.82	-1,359.66	1,359.51	0.54	0.03	-11.71
	7,994.00	2.76	76.10	7,775.55	7.61	-1,355.21	1,355.07	0.40	0.11	-8.17
	8,088.00	2.69	80.70	7,869.44	8.51	-1,350.84	1,350.72	0.24	-0.07	4.89
	8,183.00	2.89	85.45	7,964.33	9.06	-1,346.25	1,346.14	0.32	0.21	5.00
	8,278.00	2.37	60.08	8,059.23	10.23	-1,342.16	1,342.08	1.33	-0.55	-26.71
	8,373.00	1.85	355.98	8,154.18	12.74	-1,340.57	1,340.54	2.40	-0.55	-67.47
	8,468.00	1.69	10.57	8,249.13	15.64	-1,340.42	1,340.45	0.50	-0.55 -0.17	
	8,563.00	1.20	342.43	8,344.10	17.97	-1,340.46	1,340.45	0.89	-0.17 -0.52	15.36 -29.62





Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-350 PAD

Well: Wellbore: NBU 921-35N4BS NBU 921-35N4BS

Design: NBU 921-35N4BS

Local Co-ordinate Reference:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

TVD Reference:
MD Reference:

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

North Reference:

I rue Minimum Curvature

**Survey Calculation Method:** 

Database:

Survey	
--------	--

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,658.00	1.29	306.67	8,439.08	19.56	-1,341.62	1,341.73	0.81	0.09	-37.64
8,753.00	1.21	288.61	8,534.06	20.52	-1,343.43	1,343.56	0.42	-0.08	-19.01
8,848.00	0.91	297.07	8,629.04	21.18	-1,345.05	1,345.20	0.36	-0.32	8.91
8,943.00	0.91	287.11	8,724.03	21.74	-1,346.44	1,346.60	0.17	0.00	-10.48
9,038.00	1.04	299.88	8,819.02	22.40	-1,347.91	1,348.08	0.27	0.14	13.44
9,132.00	0.75	325.09	8,913.01	23.32	-1,349.00	1,349.19	0.51	-0.31	26.82
9,227.00	0.65	350.17	9,008.00	24.37	-1,349.45	1,349.66	0.34	-0.11	26.40
9,322.00	0.70	328.72	9,102.99	25.39	-1,349.84	1,350.08	0.27	0.05	-22.58
9,416.00	0.44	243.66	9,196.99	25.72	-1,350.46	1,350.71	0.84	-0.28	-90.49
9,511.00	0.27	27.12	9,291.99	25.76	-1,350.69	1,350.93	0.71	-0.18	151.01
9,606.00	0.20	63.25	9,386.99	26.03	-1,350.44	1,350.69	0.17	-0.07	38.03
9,701.00	0.30	98.27	9,481.99	26.07	-1,350.04	1,350.29	0.19	0.11	36.86
9,796.00	0.43	149.27	9,576.99	25.73	-1,349.62	1,349.86	0.35	0.14	53.68
9,852.00	0.51	124.73	9,632.98	25.41	-1,349.30	1,349.54	0.38	0.14	-43.82
LAST SDI M	WD PRODUCTIO	N SURVEY							
9,910.00	0.51	124.73	9,690.98	25.11	-1,348.88	1,349.11	0.00	0.00	0.00

Design /	Annotations					
	Measured	Vertical	Local Coo	rdinates		
	Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
	163.00	163.00	0.67	0.23	FIRST SDI MWD SURFACE SURVEY	
	2,525.00	2,428.10	12.56	-597.15	LAST SDI MWD SURFACE SURVEY	
	2,582.00	2,481.96	11.95	-615.80	FIRST SDI MWD PRODUCTION SURVEY	
	9,852.00	9,632.98	25.41	-1,349.30	LAST SDI MWD PRODUCTION SURVEY	
	9,910.00	9,690.98	25.11	-1,348.88	SDI PROJECTION TO TD	

Checked By:	Approved By:	Date:



# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-35O PAD NBU 921-35N4BS

NBU 921-35N4BS

Design: NBU 921-35N4BS

**Survey Report - Geographic** 

29 March, 2011





#### SDI Survey Report - Geographic



Company: Project:

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH NBU 921-350 PAD

Well:

NBU 921-35N4BS

Wellbore:

NBU 921-35N4BS

Design:

NBU 921-35N4BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference

North Reference:

**Survey Calculation Method:** 

Database:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

Minimum Curvature

EDM5000-RobertS-Local

**Project** 

UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Map Zone:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

From:

UINTAH\_NBU 921-350 PAD, SECTION 35 T9S R21E

Site Position:

Lat/Long

Northing: Easting:

14,524,559.98 usft 2.056.374.00 usft

Latitude:

Longitude:

39° 59' 11.076 N 109° 30' 54.256 W

**Position Uncertainty:** 

0.00 ft

Slot Radius:

13.200 in

**Grid Convergence:** 

0.95°

Well

NBU 921-35N4BS, 388 FSL 1770 FEL

**Well Position** 

+N/-S +E/-W 0.00 ft

0.00 ft

Northing:

14,524,541.29 usft

Latitude:

39° 59' 10.892 N

**Position Uncertainty** 

0.00 ft

Easting: Wellhead Elevation: 2,056,367.31 usft ft

Longitude: **Ground Level:**  109° 30' 54,346 W

5,100.00 ft

0.00

Wellbore

NBU 921-35N4BS

Magnetics

**Model Name** 

Sample Date

Declination

(°)

**Dip Angle** (°)

Field Strength

(nT)

IGRF2010

02/11/2011

0.00

11.12

65.86

52,352

Design

NBU 921-35N4BS

Audit Notes:

Version:

1.0

Phase:

**ACTUAL** 

Tie On Depth:

Depth From (TVD)

+N/-S

+E/-W

Direction

Vertical Section:

(ft)

(°)

(ft)

0.00

(ft) 0.00

271.21

Survey Program

03/29/2011 Date

From (ft)

To

(ft)

Survey (Wellbore)

**Tool Name** 

Description

15.00 2.582.00 2,525.00 Survey #1 SDI MWD SURFACE (NBU 921

SDI MWD

SDI MWD - Standard ver 1.0.1

9,910.00 Survey #2 SDI MWD PRODUCTION (NBU

SDI MWD

SDI MWD - Standard ver 1.0.1

Survey Measured Vertical Map Map Depth Inclination Azimuth Depth Northing Easting +N/-S +E/-W (ft) (ft) (usft) (°) (°) (ft) (ft) (usft) Latitude Longitude 0.00 0.00 0.00 0.00 0.00 0.00 14,524,541.29 2,056,367.31 39° 59' 10.892 N 109° 30' 54.346 W 15.00 0.00 15.00 0.00 0.00 0.00 14,524,541,29 2.056.367.31 39° 59' 10.892 N 109° 30' 54.346 W 163.00 0.55 18.80 163.00 0.67 0.23 14,524,541.97 2,056,367.52 39° 59' 10.899 N 109° 30' 54.343 W FIRST SDI MWD SURFACE SURVEY 249.00 1.08 320.96 248.99 1.69 -0.15 14,524,542.98 2,056,367,13 39° 59' 10,909 N 109° 30' 54.348 W 334.00 1.47 287.39 333.97 2.64 -1.69 14,524,543.90 2,056,365.57 39° 59' 10.919 N 109° 30' 54,367 W 425.00 2.61 267.61 424.91 2.90 -4.8814,524,544.11 2,056,362.38 39° 59' 10.921 N 109° 30' 54.408 W 515.00 3.94 270.85 514.76 2.86 -10.0214,524,543.99 2,056,357.24 39° 59' 10.921 N 109° 30' 54.474 W 605.00 5.39 272.15 604.46 3.07 -17.33 14,524,544.07 2,056,349.92 39° 59' 10.923 N 109° 30' 54.568 W 695.00 7.24 270.99 693.91 3.32 -27.23 14,524,544.16 2,056,340.03 39° 59' 10.925 N 109° 30' 54.695 W 785.00 9.23 272.25 782.98 3.71 -40,11 14,524,544.33 2,056,327.14 39° 59' 10.929 N 109° 30' 54.861 W



#### SDI

#### Survey Report - Geographic

TVD Reference:



Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-350 PAD

 Well:
 NBU 921-35N4BS

 Wellbore:
 NBU 921-35N4BS

 Design:
 NBU 921-35N4BS

Local Co-ordinate Reference: Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

**MD Reference:** GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

North Reference: Tru

Survey Calculation Method: Minimum Curvature

Database: EDM5000-RobertS-Local

<b>ә</b> у									
leasured			Vertical			Мар	Мар		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
875.00	10.97	270.31	871.58	4.04	-55.89	14,524,544.40	2,056,311.36	39° 59′ 10.932 N	109° 30' 55.064
965.00	12.93	270.75	959.63	4.21	-74.52	14,524,544.26	2,056,292.72	39° 59' 10.934 N	109° 30' 55.303
1,055.00	14.53	271.16	1,047.05	4.57	-95.88	14,524,544.27	2,056,271.36	39° 59' 10.938 N	109° 30' 55.578
1,145.00	16.05	271.71	1,133.86	5.17	-119.60	14,524,544.47	2,056,247.63	39° 59′ 10.944 N	109° 30' 55.882
1,235.00	17.49	272.57	1,220.03	6.15	-145.55	14,524,545.02	2,056,221.67	39° 59′ 10.953 N	109° 30' 56.216
1,325.00	19.13	272.45	1,305.48	7.39	-173.80	14,524,545.78	2,056,193.41	39° 59′ 10,965 N	109° 30' 56.579
1,415.00	19.25	270.57	1,390.48	8.17	-203.37	14,524,546.07	2,056,163.83	39° 59' 10.973 N	109° 30' 56.959
1,505.00	20.18	270.46	1,475.20	8.44	-233.73	14,524,545.84	2,056,133.47	39° 59' 10.976 N	109° 30' 57.349
1,595.00	21.11	268.48	1,559.42	8.13	-265.45	14,524,545.00	2,056,101.75	39° 59' 10.973 N	109° 30' 57.756
1,685.00	22.09	268.90	1,643.10	7.38	-298.58	14,524,543.70	2,056,068.65	39° 59' 10.965 N	109° 30' 58.182
1,775.00	21.50	270.89	1,726.67	7.31	-331.99	14,524,543.07	2,056,035.24	39° 59' 10.965 N	109° 30' 58.611
1,865.00	21.05	272.44	1,810.53	8.25	-364.63	14,524,543.47	2,056,002.59	39° 59' 10.974 N	109° 30' 59.031
1,955.00	21.19	273.66	1,894.49	9.98	-397.01	14,524,544.66	2,055,970.19	39° 59' 10.991 N	109° 30' 59.447
2,045.00	22.45	272.83	1,978.04	11.87	-430.40	14,524,545.99	2,055,936.76	39° 59′ 11.010 N	109° 30' 59.876
2,135.00		271.74	2,061.88	13.19	-463.07	14,524,546.76	2,055,904.08	39° 59' 11.023 N	109° 31' 0.296
2,225.00	20.13	269.88	2,146.38	13.63	-494.05	14,524,546.69	2,055,873.10	39° 59' 11.027 N	109° 31' 0.694
2,315.00	20.14	268,35	2,230.88	13.15	-525.02	14,524,545.69	2,055,842.14	39° 59' 11.022 N	109° 31' 1.092
2,405.00 2,495.00	20.28 19.96	270.28 269.45	2,315.34	12.78 12.71	-556.11 597.07	14,524,544.80	2,055,811.06	39° 59' 11.019 N	109° 31' 1.491
	19.34	268.92	2,399.85		-587.07	14,524,544.22	2,055,780.11	39° 59' 11.018 N	109° 31' 1.889
2,525.00			2,428.10	12.56	-597.15	14,524,543.91	2,055,770.03	39° 59' 11.017 N	109° 31' 2.019
	DI MWD SURF								
2,582.00	18.87	267.28	2,481.96	11.95	-615.80	14,524,542.98	2,055,751.40	39° 59′ 11.010 N	109° 31' 2.258
	DI MWD PROI								
2,677.00	18.94	266.30	2,571.84	10.22	-646.53	14,524,540.74	2,055,720.70	39° 59' 10.993 N	109° 31' 2.653
2,771.00	18.30	263.41	2,660.92	7.55	-676.41	14,524,537.57	2,055,690.86	39° 59′ 10.967 N	109° 31' 3.037
2,866.00	18.42	266.17	2,751.09	4.83	-706.21	14,524,534.36	2,055,661.12	39° 59' 10.940 N	109° 31' 3.420
2,961.00	17.97	271.96	2,841.34	4.33	-735.83	14,524,533.36	2,055,631.51	39° 59' 10.935 N	109° 31' 3.80′
3,056.00	19.39	274.58	2,931.34	6.09	-766.20	14,524,534.62	2,055,601.12	39° 59' 10.952 N	109° 31′ 4.19′
3,151.00	20.13	275.91	3,020.74	9.03	-798.18	14,524,537.03	2,055,569.09	39° 59' 10.982 N	109° 31' 4.602
3,246.00		276.37	3,109.78	12.58	-831.11	14,524,540.02	2,055,536.10	39° 59' 11.017 N	109° 31' 5.026
3,341.00	20.10	275.39	3,198.83	15.97	-864.03	14,524,542.87	2,055,503.13	39° 59' 11.050 N	109° 31′ 5.448
3,436.00	19.67	275.55	3,288.17	19.05	-896.20	14,524,545.41	2,055,470.92	39° 59' 11.081 N	109° 31' 5.86
3,531.00	19.09	275.62	3,377.78	22.12	-927.57	14,524,547.96	2,055,439.50	39° 59' 11.111 N	109° 31' 6.264
3,625.00		276.38	3,466.79	25.27	-957.63	14,524,550.61	2,055,409.39	39° 59' 11.142 N	109° 31' 6.65
3,720.00		276.51	3,556.74	28.71	-988.00	14,524,553.54	2,055,378.97	39° 59' 11.176 N	109° 31' 7.04
3,815.00		277.08	3,646.55	32.37	-1,018.74	14,524,556.69	2,055,348.17	39° 59' 11.212 N	109° 31' 7.436
3,910.00	18.05	278.47	3,736.65	36.44	-1,048.59	14,524,560.26	2,055,318.26	39° 59' 11.252 N	109° 31' 7.81
4,006.00	17.54	275.89	3,828.06	40.11	-1,077.69	14,524,563.45	2,055,289.10	39° 59' 11.289 N	109° 31' 8.19
4,100.00	16.75	275.29	3,917.88	42.81	-1,105.27 4 433 54	14,524,565.69	2,055,261.48	39° 59' 11.315 N	109° 31' 8.548
4,196.00	16.37	275.19	4,009.90	45.31	-1,132.51 1,150.47	14,524,567.73	2,055,234.20	39° 59' 11.340 N	109° 31′ 8.898
4,291.00		275.54	4,101.05	47.82	-1,159.17	14,524,569.79	2,055,207.50	39° 59' 11.365 N	109° 31' 9.240
4,386.00 4,481.00		277.51 277.84	4,192,29	50.82	-1,185.47 1,240.41	14,524,572.36	2,055,181.16	39° 59' 11.394 N	109° 31' 9.578
4,576.00		283.55	4,283.89 4,375.90	54.18 58.54	-1,210.41 -1,233.64	14,524,575.30	2,055,156.17 2,055,132.87	39° 59' 11.428 N	109° 31' 9.899
4,671.00	14.40	284.36	4,467.97	64.18	-1,256.35	14,524,579.27		39° 59' 11.471 N	109° 31' 10.197
4,766.00		282.17	4,560.30	69.34	-1,236.35 -1,278.10	14,524,584.54 14,524,589.33	2,055,110.07 2,055,088.23	39° 59' 11.526 N 39° 59' 11.577 N	109° 31' 10.489 109° 31' 10.768
4,861.00	12.07	275.25		72.47		14,524,592.13			
4,956.00	11.67	275.88	4,653.07 4,746.04	74.36	-1,298.31 -1,317.76	14,524,592.13	2,055,067.97 2,055,048.50	39° 59' 11.608 N 39° 59' 11.627 N	109° 31' 11.028 109° 31' 11.278
5,051.00		274.95	4,839.13	74.30 76.16	-1,317.76	14,524,595.17	2,055,029.58	39° 59' 11.645 N	109° 31' 11.52'
5,145.00	10.14	274.53	4,931.47	76.16 77.46	-1,356.6 <del>4</del> -1,354.13	14,524,595.17	2,055,029.58	39° 59' 11.658 N	
5,240.00	8.83	270.91	5,025.17	77.46 78.09	-1,35 <del>4</del> .13 -1,369.77	14,524,596.19			109° 31' 11.748
5,335.00	6.80	270.56	5,023.17	78.0 <del>9</del> 78.26	-1,382.69	14,524,596.51	2,054,996.43 2,054,983.51	39° 59' 11.664 N 39° 59' 11.666 N	109° 31' 11.946
5,430.00	4.92	266.86	5,119.29	78.29	-1,302.69 -1,392.38	14,524,596.18			109° 31' 12.112
5,524.00	3.04	266.92	5,213.79 5,307.55	76.09 77.74	-1,392.36 -1,398.89	14,524,595.72	2,054,973.82	39° 59' 11.664 N	109° 31' 12.237
5,619.00	1.59	238.36	5,402.48	76.91	-1,402.53	14,524,595.72	2,054,967.31 2,054,963.69	39° 59′ 11.660 N 39° 59′ 11.652 N	109° 31' 12.321 109° 31' 12.367



# **SDI**Survey Report - Geographic



Company: Project: US ROCKIES REGION PLANNING

Site:

UTAH - UTM (feet), NAD27, Zone 12N

Well:

UINTAH\_NBU 921-350 PAD NBU 921-35N4BS NBU 921-35N4BS

Wellbore: Design:

NBU 921-35N4BS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

True

Minimum Curvature

<b>е</b> у									
leasured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)		
				(19	(11)	(uoit)	(43/1)	Latitude	Longitude
5,714.00	1.31	135.69	5,497.46	75.44	-1,402.89	14,524,593.36	2,054,963.35	39° 59' 11.638 N	109° 31' 12.372
5,809.00	1.0 <del>4</del>	138.10	5,592.44	74.03	-1,401.56	14,524,591.96	2,054,964.71	39° 59' 11.624 N	109° 31' 12.358
5,904.00	0.94	150.80	5,687.42	72.70	-1,400.60	14,524,590.66	2,054,965.69	39° 59' 11.611 N	109° 31' 12.34
5,998.00	1.01	1 <b>4</b> 7.15	5,781.41	71.33	-1,399.78	14,524,589.30	2,054,966.54	39° 59' 11.597 N	109° 31' 12.33
6,093.00	1.19	152.20	5,876.39	69.76	-1,398.86	14,524,587.74	2,054,967.48	39° 59' 11.582 N	109° 31' 12.32
6,188.00	1.17	150.38	5,971.37	68.04	-1,397.93	14,524,586.04	2,054,968.44	39° 59' 11.565 N	109° 31' 12.30
6,283.00	2.31	143.48	6,066.33	65.66	-1,396.31	14,524,583.69	2,054,970.10	39° 59′ 11.541 N	109° 31' 12.28
6,378.00	2.22	140.06	6,161.25	62.71	-1,393.99	14,524,580.77	2,054,972.47	39° 59' 11.512 N	109° 31' 12.25
6,473.00	2.18	145.36	6,256.18	59.81	-1,391.78	14,524,577.91	2,054,974.73	39° 59' 11.483 N	109° 31' 12.22
6,568.00	2.29	147.11	6,351.11	56.73	-1,389.72	14,524,574.87	2,054,976.84	39° 59' 11.453 N	109° 31' 12.20
6,663.00	2.20	151.27	6,446.04	53.54	-1,387.81	14,524,571.71	2,054,978.80	39° 59' 11.421 N	109° 31' 12.17
6,757.00	2.35	151.20	6,539.96	50.27	-1,386.02	14,524,568.47	2,054,980.65	39° 59′ 11.389 N	109° 31' 12.15
6,852.00	2.38	151,90	6,634.88	46.82	-1,384.15	14,524,565.05	2,054,982.57	39° 59' 11.355 N	109° 31' 12.13
6,947.00	2.45	153.23	6,729.80	43.27	-1,382.31	14,524,561.53	2,054,984.47	39° 59' 11.320 N	109° 31' 12.10
7,041.00	2.76	164.00	6,823.70	39.30	-1,380.78	14,524,557.59	2,054,986.07	39° 59' 11.280 N	109° 31' 12.08
7,137.00	2.76	161.86	6,919.59	34.88	-1,379.42	14,524,553.19	2,054,987.50	39° 59' 11.237 N	109° 31' 12.07
7,232.00	3.01	161.14	7,014.47	30.35	-1,377.90	14,524,548.68	2,054,989.09	39° 59' 11.192 N	109° 31' 12.05
7,327.00	2.94	157.94	7,109.34	25.73	-1,376.18	14,524,544.10	2,054,990.89	39° 59' 11.146 N	109° 31' 12.02
7,423.00	2.99	159.90	7,205.21	21.10	-1,374.40	14,524,539.49	2,054,992.75	39° 59' 11.101 N	109° 31' 12.00
7,518.00	3.01	158.75	7,300.08	16.45	-1,372.64	14,524,534.87	2,054,994.58	39° 59' 11.055 N	109° 31' 11.98
7,613.00	2.88	154.25	7,394.96	11.97	-1,370.70	14,524,530.43	2,054,996.60	39° 59' 11.010 N	109° 31' 11.95
7,708.00	2.72	129.27	7,489.85	8.40	-1,367.92	14,524,526.90	2,054,999.44	39° 59' 10.975 N	109° 31' 11.92
7,803.00	2.62	95.06	7,584.75	6.78	-1,364.01	14,524,525.35	2,055,003.38	39° 59' 10.959 N	109° 31' 11.87
7,898.00	2.65	83.94	7,679.65	6.82	-1,359.66	14,524,525.46	2,055,007.72	39° 59' 10.959 N	109° 31' 11.81
7,994.00	2.76	76.10	7,775.55	7.61	-1,355.21	14,524,526.32	2,055,012.16	39° 59' 10.967 N	109° 31' 11.75
8,088.00	2.69	80.70	7,869.44	8.51	-1,350.84	14,524,527.30	2,055,016.52	39° 59' 10.976 N	109° 31' 11.70
8,183.00	2.89	85.45	7,964.33	9.06	-1,346.25	14,524,527.92	2,055,021.09	39° 59' 10.982 N	109° 31' 11.64
8,278.00	2.37	60.08	8,059.23	10.23	-1,342.16	14,524,529.16	2,055,025.16	39° 59' 10.993 N	109° 31' 11.59
8,373.00	1.85	355.98	8,154.18	12.74	-1,340.57	14,524,531.70	2,055,026.72	39° 59' 11.018 N	109° 31' 11.57
8,468.00	1.69	10.57	8,249.13	15.64	-1,340.42	14,524,534.61	2,055,026.82	39° 59' 11.047 N	109° 31' 11.56
8,563.00	1.20	342.43	8,344.10	17.97	-1,340.46	14,524,536.93	2,055,026.74	39° 59' 11.070 N	109° 31' 11.57
8,658.00	1.29	306.67	8,439.08	19.56	-1,341.62	14,524,538.50	2,055,025.55	39° 59' 11.085 N	109° 31' 11.58
8,753.00	1.21	288.61	8,534.06	20.52	-1,343.43	14,524,539.43	2,055,023.73	39° 59' 11.095 N	109° 31' 11.60
8,848.00	0.91	297.07	8,629.04	21.18	-1,345.05	14,524,540.06	2,055,022.09	39° 59' 11.101 N	109° 31' 11.62
8,943.00	0.91	287.11	8,724.03	21.74	-1,346.44	14,524,540.60	2,055,020.69	39° 59' 11,107 N	109° 31' 11.64
9,038.00	1.04	299.88	8,819.02	22.40	-1,347.91	14,524,541.23	2,055,019.21	39° 59' 11.113 N	109° 31' 11.66
9,132.00	0.75	325.09	8,913.01	23.32	-1,349.00	14,524,542.14	2,055,018.11	39° 59' 11.123 N	109° 31' 11.67
9,227.00	0.65	350.17	9,008.00	24.37	-1,349.45	14,524,543.18	2,055,017.64	39° 59' 11.133 N	109° 31' 11.68
9,322.00	0.70	328.72	9,102.99	25.39	-1,349.84	14,524,544.20	2,055,017.23	39° 59' 11.143 N	109° 31' 11.69
9,416.00	0.44	243.66	9,196.99	25.72	-1,350.46	14,524,544.52	2,055,016.60	39° 59' 11.146 N	109° 31' 11.69
9,511.00	0.27	27.12	9,291.99	25.76	-1,350.69	14,524,544.55	2,055,016.38	39° 59' 11.147 N	109° 31' 11.70
9,606.00	0.20	63.25	9,386.99	26.03	-1,350.44	14,524,544.83	2,055,016.62	39° 59' 11.149 N	109° 31' 11.69
9,701.00	0.30	98.27	9,481.99	26.07	-1,350.04	14,524,544.87	2,055,017.02	39° 59' 11.150 N	109° 31' 11.69
9,796.00	0.43	149.27	9,576.99	25.73	-1,349.62	14,524,544.54	2,055,017.45	39° 59' 11.146 N	109° 31' 11.68
9,852.00	0.51	124.73	9,632.98	25.41	-1,349.30	14,524,544.22	2,055,017.77	39° 59' 11.143 N	109° 31' 11.68
	I MWD PROD			20.11	1,0-10.00	7.7,027,077.22	=,000,017.77	00 00 11,140 14	108 31 11.00
9,910.00	0.51	124.73		25.11	_1 3/10 00	14 524 542 02	2 055 049 20	20° E0! 44 440 N	4000 041 44 07
3,310.00	0.51	124.13	9,690.98	25.11	-1,348.88	14,524,543.93	2,055,018.20	39° 59′ 11.140 N	109° 31' 11.67



#### SDI

#### Survey Report - Geographic



Company: Project: US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-350 PAD

Well: Wellbore: Design: NBU 921-35N4BS NBU 921-35N4BS NBU 921-35N4BS Local Co-ordinate Reference:

Well NBU 921-35N4BS

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

TVD Reference: MD Reference:

GL 5100' & KB 19' @ 5119.00ft (PIONEER 54)

North Reference:

True

Survey Calculation Method:

Minimum Curvature

Database:

Design Annotations								
	Measured	Vertical	Local Coo	rdinates				
	Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment			
	163.00	163.00	0.67	0.23	FIRST SDI MWD SURFACE SURVEY			
	2,525.00	2,428.10	12.56	-597.15	LAST SDI MWD SURFACE SURVEY			
	2,582.00	2,481.96	11.95	-615.80	FIRST SDI MWD PRODUCTION SURVEY			
	9,852.00	9,632.98	25.41	-1,349.30	LAST SDI MWD PRODUCTION SURVEY			
	9,910.00	9,690.98	25.11	-1,348.88	SDI PROJECTION TO TD			

Checked By:	Approved By:	Date:

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

AMENDED	REPORT 🗸
/1 . 1 1. 1 4	

FORM 8

(highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a. TYPE OF WELL: 7. UNIT or CA AGREEMENT NAME OIL U GAS WELL OTHER UTU63047A b. TYPE OF WORK: 8. WELL NAME and NUMBER: DIFF. RESVR. WELL RE-ENTRY NBU 921-35N4BS OTHER 2. NAME OF OPERATOR: 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304751395 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 (720) 929-6100 NATURAL BUTTES 4. LOCATION OF WELL (FOOTAGES) QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: AT SURFACE: SWSE 388 FSL 1770 FEL S35, T9S, R21E SWSE 35 9S 21E S AT TOP PRODUCING INTERVAL REPORTED BELOW: SESW 461 FSL 2183 FWL S35, T9S, R21E 12. COUNTY 13. STATE AT TOTAL DEPTH: SESW 413 FSL 2235 FWL S35, T9S, R21E UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED READY TO PRODUCE 🗸 2/1/2011 3/23/2011 6/22/2011 5100 GL 19. PLUG BACK T.D.: MD 9,852 18. TOTAL DEPTH: MD 21. DEPTH BRIDGE 9.910 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* MD PLUG SET: TVD 9.691 TVD 9,633 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 WAS WELL CORED? YES (Submit analysis) ACBL-CHI TRIPLE WAS DST RUN? NO 🗸 YES (Submit report) COMBO-RMTE-GRC-RCBL-BHP-HDIL/ZDL/CNGR DIRECTIONAL SURVEY? NO C YES 🗸 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* AMOUNT PULLED DEPTH NO. OF SACKS VOLUME (BBL) 20" 36.7# STL 40 28 11" 8 5/8" **IJ-55** 28# 2,547 650 0 7 7/8" 4 1/2" 1-80 11.6# 9.896 130 1.874 25. TUBING RECORD SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 9,079 26. PRODUCING INTERVALS 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) SIZE NO. HOLES PERFORATION STATUS (A) WASATCH 5.869 5,884 5,869 5,884 0.36 24 Open Squeezed (B) **MESAVERDE** 7.978 9.658 7,978 9,658 0.36 139 Open Squeezed (C) Open Squeezed (D) Saueezed 28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND TYPE OF MATERIAL 7978 - 9658 PUMP 4,888 BBLS SLICK H2O & 89,556 LBS SAND DID NOT FRAC STAGE 7 (WASATCH) 29. ENCLOSED ATTACHMENTS: 30. WELL STATUS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT ✓ DIRECTIONAL SURVEY PROD SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER:

24	INTERNAL	DECEMENTAL

#### INTERVAL A (As shown in item #26)

DATE FIRST PR	TE FIRST PRODUCED: TEST DATE:		COLD BROOKS CHINE INCOME.		Complete to an or properties of the properties	OIL – BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:	
6/22/2011		6/24/2011		24		RATES: →	0	1,191	721	FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 995	CSG. PRESS. 1,947	API GRAVITY	Management Deposition (Control of the Control of th		24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF: 1,191	WATER – BBL: <b>721</b>	INTERVAL STATUS: PROD
				INTE	ERVAL B (As show	wn in item #26)				
DATE FIRST PR	DATE FIRST PRODUCED: TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:	
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS GAS/OIL RATIO		24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
				INTE	ERVAL C (As show	wn in item #26)				
DATE FIRST PR	DATE FIRST PRODUCED: TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER - BBL:	PROD. METHOD:	
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS GAS/OIL RATIO		24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS:
	<del></del>			INTE	ERVAL D (As show	wn in item #26)	-	Access and a second control of the second co		
DATE FIRST PRODUCED: TEST DATE:			HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:	
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS GAS/OIL RATIO		24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
32. DISPOSITIO	32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)									

#### 33. SUMMARY OF POROUS ZONES (Include Aquifers):

tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1,492 1,787 2,385 4,915 7,641	7,641 9,910	TD		

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history and final survey. Completion chrono details individual frac stages. Amended # 28 on Completion Report. Attached is a revised Completion Chrono.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE

REGULATORY ANALYST

SIGNATURE

8/23/2011 DATE

This report must be submitted within 30 days of

- · completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

801-359-3940 Fax:

		US	S ROC	KIES R	EGION	
	0	pera	tion S	umma	ary Report	
Well: NBU 921-35N4BS (YELLOW)	Spud Co	onducto	r: 2/1/20	11	Spud Date: 2/18/2011	
Project: UTAH-UINTAH	Site: NB	U 921-3	50 PAD		Rig Name No: MILES 3/3	
Event: COMPLETION	Start Date: 6/13/2011				End Date: 6/22/2011	
Active Datum: RKB @5,119.00ft (above Mean Sea Level)  UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0						
Date Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)	
6/10/2011 7:00 - 15:00 8.00	COMP	33	С	P	FILL SURFACE CSG. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 12 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 31 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 87 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 44 PSI. BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFWE.	

# Operation Summary Report

Well: NBU 921-35N4BS (YELLOW)		onductor: 2/1/201	Spud Date: 2/			
Project: UTAH-UINTAH	Site: NE	BU 921-350 PAD		Rig Name No: MILES 3/3		
Event: COMPLETION	Start Da	nte: 6/13/2011		End Date: 6/22/2011		
Active Datum: RKB @5,119.00ft (above Mean Level)	n Sea	UWI: SW/SE/0/9	/S/21/E/35/0/0/6/PM/S	/388.00/E/0/1,770.00/0/0		
Date Time Duration Start-End (hr)	Phase	Code Sub Code	P/U MD From (ft)			
6/13/2011 8:30 - 18:00 9.50	COMP	36 B	Р	PERF STG 1)PU PU & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH' P/U PERF AS PER STG 1 PERF DESIGN. POOH.		
				FRAC STG 1)WHP 711 PSI, BRK 3600 PSI @ 4.6 BPM. ISIP 2827 PSI, FG .74. PUMP 100 BBLS @ 38.2 BPM @ 5924 PSI = 71% HOLES OPEN. ISIP 2947 PSI, FG .75, NPI 120 PSI. MP 6608 PSI, MR 44.2 BPM, AP 5965 PSI, AR 36.5 BPM, PMP 757 BBLS SW & 8486 LBS OF 30/50 SND &		
				2458 LBS OF 20/40 RESIN SND. TOTAL PROP 10,944 LBS X-OVER TO PERF CREW		
				PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9320' P/U PERF AS PER PERF DESIGN. POOHX-OVER TO FRAC CREW		
				FRAC STG 2)WHP 1520 PSI, BRK 4691 PSI @ 6.0 BPM. ISIP 2978 PSI, FG .76. PUMP 100 BBLS @ 36.6 BPM @ 5610 PSI = 66% HOLES OPEN. ISIP 2894 PSI, FG .75, NPI -84 PSI. MP 6566 PSI, MR 48.1 BPM, AP 5956 PSI, AR 45.7 BPM, PMP 710 BBLS SW & 9489 LBS OF 30/50 SND &		
				2571 LBS OF 20/40 RESIN SND. TOTAL PROP 12,060 LBS SWI X-OVER TO WIRE LINE		
				PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9074' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC CREW		
				FRAC STG 3)WHP 835 PSI, BRK 2607 PSI @ 6.0 BPM. ISIP 2110 PSI, FG .68. PUMP 100 BBLS @ 40.2 BPM @ 5296 PSI = 64% HOLES OPEN.		
				ISIP 2590 PSI, FG .73, NPI 480 PSI. MP 6308 PSI, MR 51 BPM, AP 5570 PSI, AR 49.2 BPM,		
				PMP 830 BBLS SW & 12,993 LBS OF 30/50 SND & 2117 LBS OF 20/40 RESIN SND. TOTAL PROP 15,110 LBS,SWI X-OVER TO WL		
				PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8694' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC		
				FRAC STG 4)WHP 625 PSI, BRK 3990 PSI @ 4.7 BPM. ISIP 2931 PSI, FG .78 PUMP 100 BBLS @ 27.3 BPM @ 5742 PSI = 60% HOLES OPEN. ISIP 2926 PSI, FG .78, NPI -5 PSI. MP 6502 PSI, MR 47.1 BPM, AP 5872 PSI, AR 38.5 BPM,		
				PMP 647 BBLS SW & 8683 LBS OF 30/50 SND & 2403 LBS OF 20/40 RESIN SND. TOTAL PROP 11,086 LBS,SWI X-OVER TO PERF.		

PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP

#### US ROCKIES REGION **Operation Summary Report** Spud Conductor: 2/1/2011 Spud Date: 2/18/2011 Well: NBU 921-35N4BS (YELLOW) Project: UTAH-UINTAH Site: NBU 921-350 PAD Rig Name No: MILES 3/3 Event: COMPLETION Start Date: 6/13/2011 End Date: 6/22/2011 Active Datum: RKB @5,119.00ft (above Mean Sea UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1.770.00/0/0 Level) Time Duration Phase Sub P/U MD From Date Code Operation Start-End (hr) Code (ft) GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8694' P/U PERF AS PER STG 5 PERF DESIGN. POOH. SWIFN. 6/14/2011 6:45 - 7:00 0.25 COMP HSM. HIGH PSI LINES. WIRE LINE AWARENESS. 48 7:00 - 18:00 36 P FRAC STG 5)WHP 1634 PSI, BRK 2634 PSI @ 4.6 11.00 COMP В BPM. ISIP 2052 PSI, FG .69. PUMP 100 BBLS @ 48.5 BPM @ 6014 PSI = 69% HOLES OPEN. ISIP 2818 PSI, FG .78, NPI 766 PSI. MP 6505 PSI, MR 50.8 BPM, AP 5505 PSI, AR 49.3 BPM. PMP 1331 BBLS SW & 26,316 LBS OF 30/50 SND & 2586 LBS OF 20/40 RESIN SND. TOTAL PROP 28,902 LBS.SWI X-OVER TO WL PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8160' P/U PERF AS PER DESIGN. POOH.X-OVER TO FRAC CREW FRAC STG 6)WHP 440 PSI, BRK 2727 PSI @ 5-0 BPM. ISIP 1944 PSI, FG .68. PUMP 100 BBLS @ 47.3 BPM @ 5808 PSI = 67% HOLES OPEN. ISIP 2330 PSI, FG .73, NPI 380 PSI. MP 6349 PSI, MR 50.5 BPM, AP 5802 PSI, AR 49.7 **BPM** PMP 613 BBLS SW & 8905 LBS OF 30/50 SND & 2549 LBS OF 20/40 RESIN SND. TOTAL PROP 11,454 LBS.SWI X-OVER TO WL PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 5934' P/U PERF AS PER PERF DESIGN. POOH.X-OVER TO FRAC CREW FRAC STG 7)WHP 160 PSI, BRK 755 PSI @ 4.8 BPM. ISIP 387 PSI, FG .50. FG VERY LOW. CALL ZACH GARRITY. DID NOT FRAC STG 7 DUE T/ VERY LOW FG. PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 5819'. POOH. SWI. DONE FRACING THIS WELL. TOTAL SAND = 89,556 LBS TOTAL CLFL = 4888 BBLS TOTAL SCALE = 576 GAL

8/23/2011 2:56:36PM

P

P

P

6/21/2011

6/22/2011

11:00 - 13:00

13:00 - 17:00

6:45 - 7:00

2.00

4.00

0.25

COMP

COMP

COMP

30

31

48

1

TOTAL BIO = 101 GAL

HSM. HIGH PSI LINES.

SDFN.

RDSU. MOVE OVER. RUSU. ND WH. NU BOP. RU

MU 3-7/8" BIT, POBS, 1.87" XN. RIH AS MEAS AND

PU 2-3/8" L-80 TBG. PU 150-JTS, EOT AT 4725'.

FLOOR AND TBG EQUIP. SPOT TBG.

#### Operation Summary Report

Well: NBU 921	-35N4BS (YELLO	Well: NBU 921-35N4BS (YELLOW)			2/1/201	1	Spud Date: 2/18/2011
			Site: NE	BU 921-35	O PAD		Rig Name No: MILES 3/3
			Start Da	ate: 6/13/2	011		End Date: 6/22/2011
Active Datum: Level)	Sea UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/3			)/S/21/E/3	35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0		
Date	Time Start-End	Duration (hr)	Phase		Sub Code	P/U	MD From Operation (ft)
	7:00 - 18:00	11.00	COMP	44	C	P	OPEN WELL 0 PSI. CONT PU 2 3/8 L-80 TBG. TAG SAND @ 5820' RU DRL EQUIP. TEST BOP'S T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. BRK CONV CIRC. BEG DRL OUT.  1ST CBP)TAG SAND @ 5820' = 15' SAND. DRL OUT CBP @ 5835' IN 7 MIN. 0 PSI INCR. CONT RIH.  2ND CBP)TAG SAND @ 5920' = 5' SAND. DRL OUT CBP @ 5925' IN 4 MIN, 0 PSI INCR. CONT RIH.  3RD CBP)TAG SAND @ 8120' =25' SAND. DRL OUT CBP @ 8145' IN 7 MIN. 700 PSI INCR. CONT RIH.  4TH CBP)TAG SAND @ 8345' = 35' SAND. DRL OUT CBP @ 8380' IN 5 MIN. 250 PSI INCR. CONT RIH.  5TH CBP)TAG SAND @ 8640' = 40' SAND. DRL OUT CBP @ 8680' IN 5 MIN. 200 PSI INCR. CONT RIH.  6TH CBP)TAG SAND @ 9044' = 30' SAND. DRL OUT CBP @ 9074' IN 2 MIN. 200 PSI INCR. CONT RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT CBP @ 9310' IN 4 MIN. 300 PSI INCR. CONT RIH.  7TH CBP)TAG SAND @ 9280' =30' SAND. DRL OUT CBP @ 9310' IN 4 MIN. 300 PSI INCR. CONT RIH.  7TH CBP)TAG SAND BBLS. RD DRL EQUIP. POOH, LD EXESS 2 3/8 L-80 TBG. PU 4 1/16 TBG HNGR & LAND TBG W/  KB = 19' 4 1/16 TBG HNGR = .83 286 JTS 2 3/8 L-80 TBG = 9056.84 (1.875) XN-NIPPLE = 1.86 EOT @ 9078.58'  ND BOP, NUWH. DROP BALL. PUMP BIT OFF W/ 20 BBLS. SWI FOR 30 MIN T/ LET BIT FALL T/ PBTD. OPEN WELL T/ PIT. UNLOAD TBG. TURN WELL OVER T/ FBC. RD RIG. SLIDE OVER T/ NEXT WELL. (35N4CS, GREEN WELL.) RU RIG. PREP & TALLY NEW 2 3/8
	13:45 - 13:45	0.00	PROD	50			L-80 TBG. WELL TURNED TO SALES @ 1345 HR ON 6/22/11 - 1000 MCFD, 1920 BWPD, CP 1850#, FTP 1550#,
6/23/2011	7:00 -			33	Α		CK 20/64" 7 AM FLBK REPORT: CP 2300#, TP 1600#, 20/64" CK, 45 BWPH, HVY SAND, - GAS TTL BBLS RECOVERED: 1956
6/24/2011	7:00 -			33	Α		BBLS LEFT TO RECOVER: 2998 7 AM FLBK REPORT: CP 2150#, TP 1400#, 20/64" CK, 35 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 2872
	7:00 -			50			BBLS LEFT TO RECOVER: 2082 WELL IP'D ON 6/24/11 - 1191 MCFD, 0 BOPD, 721 BWPD, CP 1947#, FTP 995#, CK 20/64", LP 164#, 24 HRS
6/25/2011	7:00 -			33	Α		7 AM FLBK REPORT: CP 2100#, TP 1250#, 20/64" CK, 26 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 3593 BBLS LEFT TO RECOVER: 1361
6/26/2011	7:00 -			33	Α		7 AM FLBK REPORT: CP 2000#, TP 1150#, 20/64" CK, 18 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 4113

8/23/2011 2:56:36PM

	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST		
SUNDF	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for proposition bottom-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-35N4BS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS		9. API NUMBER: 43047513950000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE N treet, Suite 600, Denver, CO, 80217 3779	UMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWSE Section: 35	P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	☐ CASING REPAIR		
☐ NOTICE OF INTENT	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME		
Approximate date work will start:	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
✓ SUBSEQUENT REPORT	☐ DEEPEN ☐	FRACTURE TREAT	□ NEW CONSTRUCTION		
Date of Work Completion: 9/14/2011	OPERATOR CHANGE	PLUG AND ABANDON	□ PLUG BACK		
	□ PRODUCTION START OR RESUME □	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:					
	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
DRILLING REPORT	☐ TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL		
Report Date:	□ WATER SHUTOFF	SI TA STATUS EXTENSION	☐ APD EXTENSION		
	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: WORKOVER/WATER		
THE OPERATOR HAS I WELL. THE WORKOV PERFORATION CEME	MPLETED OPERATIONS. Clearly show all pertinen PERFORMED A WORKOVER OPER ER OPERATIONS CONSISTED OF NT SQUEEZE PERFS FROM 6707' T. PLEASE SEE THE ATTACHED CH HISTORY.	ATION ON THE SUBJECT A WATER SHUT OFF BY -6870', WAS SQUEEZE HRONOLOGICAL WELL U	ccepted by the		
NAME (PLEASE PRINT) Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	TITLE Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 9/15/2011			

Sundry Number: 18514 API Well Number: 43047513950000

				U	S ROC	KIES R	EGION		
				Opera	ition S	umm	ary Report		
Well: NBU 921-3	35N4BS (YELLOW)		Spud Co	nductor: 2	2/1/2011		Spud Date: 2/1	<u> </u>	
Project: UTAH-U	JINTAH		Site: NBL	J 921-350	) PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3	
Event: WELL We	ORK EXPENSE		Start Date	e: 8/18/20	)11			End Date:	
	KB @5,119.00ft (abov	ve Mean Sea		UWI: S\	N/SE/0/9/	/S/21/E/3	5/0/0/6/PM/S/388	8.00/E/0/1,770.00/0/0	
Level)  Date	Time Start-End	Duration	Phase	Code	Sub Code	P/U	MD From	Operation	
8/31/2011	13:00 -	(hr)	WO/REP	30	Code	Р	(ft)	1PM [DAY 1]	
								MIRU, FTP=240#, FCP=250#. OPEN WELL PIT. CONTROL WELL W/ 35 BBLS TMAC WATER. NDWH, NUBOP, R/U FLOOR & TBG EQUIPMENT. EOT @ 9078'. POOH STDG BACK 2-3/8" L-80 TBG. [SLM] TBG LOOKED NEW. EOT @ 2730'.	
								5:30 PM SWI-SDFN	
9/1/2011	7:00 - 17:00	10.00	WO/REP	30		Р		7AM [DAY 2] JSAPOOH W/ TBG, W.L. WORK, RIH W/ TBG, CICR, PMPG CMT, PSI.	
								SITP=1000#, SICP=1000#. BLEW WELL DN. CONTROL WELL W/ 40 BBLS TMAC WATER. EOT @ 2730'. CONTINUE POOH STDG BACK TBG. [SLM] TBG LOOKED NEW. L/D BHA. & BTM JTGAULED THREADS WHEN REMOVING XN NIPPLE.	
								MIRU CHS. RIH W/ HALL 8K CBP & SET @ 8670'. KEPT STACKING OUT ON SOMETHING WHEN RIH? PUMPED 60 BBLS TMAC WHILE RIH TO SET CBP. POOH, RDMO CHS.	
								9:45 AM MIRU PROPETRO & WTFRD CMT MANIFOLD. P/U WTFRD CICR#1 FOR 4.5 X 11.6# CSG AND RIH ON 2-3/8" TBG. SET CICR @ 8397'. P.T. TBG TO 1000# FOR 5 MIN. GOOD TEST. STING INTO RETAINER. FILL TBG W/ 7 BBLS TMAC BEFORE CATCHING PSI @ 1.5 BPM @ 600#. PUMP 20 BBLS TMAC @ 1.5 BPM @ 1100#. ISIP=700#. PUMP 3 BBLS FRESH WATER @ 2.5 BPM @ 100#. MIX & PUMP 40 SKS [8.2 BBLS] CLASS G CMT, 1 15 YEILD, 1% CFL-117 @ 1.5 BPM @ 800#. DISPLACE TBG W/ 32.5 BBLS. STAGE SQZ INTO PERFS 5 TIMES, 1.5 TO 5 MINUTE INTERVALS LEAVING 1000# ON SQZ. 1/2 BBL LEFT IN TBG. STING OUT OF RETAINER. UPPER PERFS ON A VACUM. POOH STDG BACK TBG. PUMP 10 BBLS TMAC DOWN CSG. L/D BHA.  3:30 PM P/U CICR#2 FOR 4.5 X 11.6# CSG AND RIH	
								ON TBG. EOT @ 5840'. TP @ 5869'.  5 PM SWI-SDFN. PREP TO SQZ IN AM.	

Sundry Number: 18514 API Well Number: 43047513950000

#### US ROCKIES REGION **Operation Summary Report** Well: NBU 921-35N4BS (YELLOW) Spud Conductor: 2/1/2011 Spud Date: 2/18/2011 Project: UTAH-UINTAH Site: NBU 921-350 PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3 Event: WELL WORK EXPENSE Start Date: 8/18/2011 End Date: UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0 Active Datum: RKB @5,119.00ft (above Mean Sea Level) Date Phase Code P/U Time Duration Sub MD From Operation Start-End (hr) Code (ft) 9/2/2011 7:00 - 17:00 10.00 WO/REP Р 30 7AM [DAY 3] JSA--RIH W/ TBG, CICR, POOH W/ TBG, PSI, PINCH PTS. SITP=1000#, SICP=1000#. EOT @ 5840'. BLEW WELL DOWN. CONTROL TBG W/ 40 BBLS TMAC WATER. RIH ON 2-3/8" TBG. SET CICR @ 8206'. STING INTO RETAINER. FILL TBG W/ 20 BBLS TMAC TO CATCH PSI. PUMP 30 BBLS TOTAL @ 2 BPM @ 1200#. ISIP=700#. CONTROL CSG W/ 20 BBLS TMAC-[PERFS ABOVE CICR1 PUMP 3 BBLS FRESH WATER @ 1.75 BPM @ 500#. MIX & PUMP 40 SKS CMT, (8.2 BBLS) 15.8#, 1.15 YEILD, 1% CFL-117 @ 1.5 BPM @ 800#. LOST PSI WHEN PUMPING CMT. ?? RETAINER FAILURE OF BROKE DOWN PERFS?? TBG VOLUME IS 31.7 BBLS. TRIED STEP SQZ LAST 3 BBLS. VACUM. PUMPED ANOTHER 11.6 BBLS TO CATCH PSI @ 2.3 BPM @ 300#. PUMPED TOTAL OF 15 BBLS OVER DISPLACEMENT @ 2.3 BPM @ 300#. STING OUT OF RETAINER PULLING 14K OVER. ATTEMPT TO STING BACK IN TO RETAINER. COULD NOT, LACKING 1FOOT. POOH STDG BACK TBG. FLUSH CSG W/ ANOTHER 40 BBLS WHILE POOH. FOUND STINGER CLEAN & O RINGS GOOD. LAST 6 STDS OF 2-3/8" TBG HAD CMT STRINGERS ON O.D. FILL CSG W/ 15 BBLS. PRESSURED UP TO 500# @ 2 BPM AND BLEEDS OFF WITH IN 1 MINUTE. THINKING RETAINER FAILED. CONSULT W/ ENGINEERING. DECISION WAS TO MOVE ON PER PROCEDURE FOR CICR#3 & P.T. CSG WHEN DRILLING OUT THE SQZ'S. 12 PM P/U CICR#3 FOR 4.5 X 11.6# CSG. RIH ON TBG. STARTED LOSING STRING WEIGHT @ 7978'. --(TOP PERF OF INTERVAL) -- CMT STINGERS ON CSG WALL CAUSING STRING WEIGHT LOSS. PUH & SET CICR @ 7922'. P.T. TBG TO 1500#. 5 MINUTE TEST. PUMP 1/2 BBL AND CAUGHT 1500# PSI. PUMP 8.5 BBLS @ 1.7 BPM @ 1900#. ISIP=700#. START FRESH WATER SPACER & PRESSURED UP TO 2000# ?? STING OUT OF RETAINER AND PUMPED 3 BBLS @ 3 BPM @ 400#. STING BACK IN TO RETAINER & PRESSURE UP TO 2000# INSTANTLY. BUMP PSI UP TO 3000#. HELD FOR 5 MINUTES. BLEED OFF PSI. STING OUT. POOH STDG BACK TBG. L/D BHA. STINGER LOOKED GOOD CONSULT W/ ENGINEERING, DECISION WAS TO GO AHEAD AND DO THE BALANCED PLUG PER PROCEDURE AND TEST CMT SQZ'S WHEN DRILLED OUT.

2 9/15/2011 8:40:58AM

		Sundry	Number	: 185	14 AE	ol Wel	1 Number:	43047513950000
				U	S ROC	KIES R	EGION	
				Opera	tion S	Summa	ary Report	
Well: NBU 921-3	35N4BS (YELLOW)		Spud Cor	nductor: 2	/1/2011		Spud Date: 2/18	8/2011
Project: UTAH-U	JINTAH		Site: NBU	921-35C	) PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: WELL W	ORK EXPENSE		Start Date	e: 8/18/20	11			End Date:
Active Datum: R _evel)	KB @5,119.00ft (abov	ve Mean Sea		UWI: SV	V/SE/0/9	/S/21/E/3	5/0/0/6/PM/S/388.	00/E/0/1,770.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								5PM SWI-SDF-HOL-WE. PREP TO SET BALANCED PLUG ON TUESDAY, 9/6/11. LAST PLUG FOR THIS WELL.
9/6/2011	7:00 - 15:00	8.00	WO/REP	40	A	Р		SICP=#, SITP=#, OPEN WELL, EOT @=5,898' TOP PERF @=5,869', MIRU PRO PETRO, EST CIRC, CLOSE CSG IN GET INJ RATE OF 1/2 BPM @=1,500#, PUMP 15 SX CEMENT [200' BALANCE PLUG], POOH W/ 13 JNTS 2-3/8 TBG, EOT @=5,460', SQUEEZE CEMENT TO TOP PERF, PRESSURED UP TO 1000#, BLED PRESSURE OFF POOH W/ TBG, PUMP'D 8 BBLS, PRESSURED CSG TO 500# LEFT OVER NIGHT. SWI
9/7/2011	7:00 - 17:00	10.00	WO/REP	44	A	P		HSM, MAKING CONN. P/U 3-7/8 SEALED BEARING BIT. RIH W/ 2-3/8 TBG, TAG CEMENT @=5,747', P/U PWR SWVL, BRK CIRC W/ RIG PUMP, DRL CEMENT FROM 5,747' TO 5,980' CIRC HOLE CLEAN, PRESSURE TEST SQUEEZE TO 500# FOR 10 MIN. 0# LOSS [GOOD TEST] HANG PWR SWVL BACK, CONT TO RIH TAG CEMENT @=7,923', P/U PWR SWVL EST CIRC, DRL CICR @=7,923' DRL THROUGH CICR IN 3 HRS 10 MIN. CONT TO RIH TO 8,147' HIT VERY LITTLE STREAMERS, CIRC HOLE CLEAN, PRESSURE TESTED TO 500# FOR 10 MIN W/ 0# PRESSURE LOSS, HANG PWR SWVL BACK, SWIFN.
9/8/2011	7:00 - 17:00	10.00	WO/REP	44	A	Р		SICP=0#, SITP=0#, OPEN WELL, TIH TAG CICR @=8,206' P/U PWR SWVL, BREAK CIRC W/ RIG PUMP, DRL ON RETAINER FOR 1 HR DROPPED DOWN 30', DRL ON FOR 4 HRS NOT MAKING ANY HOLE, POOH TO LOOK @ BIT. P/U NEW SMITH ROCK BIT TIH TO 5,500' SWIFN.
9/9/2011	7:00 - 17:00	10.00	WO/REP	44	В	Р		HSM, CHECK PRESSURES, 0# SITP, 0# SICP, CONT TO RIH W/ 2-3/8 TBG TAG @=8,246', P/U PWR SWVL, BRK CIRC W/ RIG PUMP DRL UP REMAINING CICR, DRL 80' CEMENT FALL THROUGH @=8,328', CIRC HOLE CLEAN W/ EOT @=8,370', P/T TO 500#, DID NOT TEST, PUMP INTO @=400#, @ =1/2 BPM,  CONSULT W/ ENGINEER, POOH W/ TBG & BIT, P/U CICR RIH TO 5,835' LEAVE HANGING ABOVE PERFS

FOR WEEKEND. PREP TO CEMENT MON.

Sundry Number: 18514 API Well Number: 43047513950000

		Sunary	Number			KIES RI		43047513950000
							ary Report	
Well: NBU 921-3	B5N4BS (YELLOW)		Spud Cor	nductor: 2	2/1/2011		Spud Date: 2/1	8/2011
Project: UTAH-U	JINTAH		Site: NBU 921-350 PAD					Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: WELL W	ORK EXPENSE		Start Date	e: 8/18/20	)11			End Date:
Active Datum: R Level)	KB @5,119.00ft (abov	ve Mean Sea		UWI: SV	.00/E/0/1,770.00/0/0			
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/12/2011	7:00 - 15:00	8.00	WO/REP	30		Р	( 7	7AM [DAY 8] JSARIH W/ TBG, CICR, PMPG CMT, PSI, POOH W/ TBG.
								WE-SITP=0#, SICP=0#. EOT @ 5835'. CONTINUE RIH W/ CICR. SET CICR @ 8298'.  MIRU PROPETRO. P.T. SURFACE LINES TO 2500#. ESTABLISH INJ RATE @ 2.0 BPM @ 50#. PRESSURED UP TO 1000# AND BROKE DOWN PERFS W/ 10 BBLS GONE.  PUMP 25 BBLS TMAC @ 2.2 BPM @ 850#.  FILL CSG W/ 5 BBLS & HOLD 200# ON CSG.  PUMP 1.5 BBLS F.W. @ 1400#. 4.5. CSG & 2-3/8"  TBG BEGAN COMMUNICATING. END PUMP 7  BBLS CMT TO PIT. CONSULT W/ ENGINEERING.  STING OUT OF CICR. REVERSE CIRCULATE W/ 40  BBLS @ 2.5. BPM @ 800#. ESTABLISH INJECTION  RATE ABOVE CICR @ 1.5 BPM @ 1500# @ 2 BBLS  GONE.  STING BACK IN CICR. PMP 3 BBLS F.W. @ 1.2 BPM @ 300#.  MIX & PUMP (10.2 BBLS) 50 SKS CLASS G CMT,  15.8#, 1.15 YEILD.  DISPLACE W/ 20 BBLS & SHUT CSG IN. PUMP 5  BBLS @ .8 BPM @ 1700#. STG TO 2000# W/  ANOTHER .25 BBLS & LOCKED UP 6.8 BBLS  LEFT IN TBG.  STING OUT, PULL 10 STDS TBG. REVERSE  CIRCULATE W/ 45 BBLS @ 3 BPM @ 1250#. GOT 2  BBLS CMT BACK IN RETURNS? @ 31 BBLS  REVERSING.  PUMP .2 BBL @ .5 BPM @ 500# FOR P.T. BUMP UP  TO 1000# @ .5 BPM. 0# LOSS IN 5 MIN. GOT .25  BBL BACK WHEN BLEEDING OFF PSI. RDMO  PROPETRO.  POOH STDG BACK TBG. L/D BHA.
9/13/2011	7:00 -		WO/REP	30		Р		7AM [DAY 9] JSA RIH W/ TBG, DRLG CMT, PSI, DRLG CICR, POOH W/ TBG.
								SICP=0#. P/U GOOD USED SMITH BIT, XO SUB & RIH OUT OF DERRICK ON 2-3/8" TBG. TAG CMT TOP @ 7958' R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION. DRILL & C/O 340' MEDIUM CMT TO CICR @ 8298'. AVERAGE 15 MIN JT. CIRCULATE WELL CLEAN. P.T. CSG TO 600#. LOST 0# IN 10 MIN.
								12:30 PM DRILL OUT WTFRD CICR IN 4 HRS 40 MIN. PUH W/ EOT @ 8230'. CIRC CLN.
								5:30 PM SWI-SDFN

9/15/2011 8:40:58AM 4

		Sundry	Number	: 185	14 AI	PI Wel	ll Number:	43047513950000
				U	S ROC	KIES R	EGION	
				Opera	ation S	Summa	ary Report	
Well: NBU 921-3	5N4BS (YELLOW)		Spud Cor	nductor: 2	2/1/2011		Spud Date: 2/1	8/2011
Project: UTAH-UINTAH			Site: NBL	J 921-350	) PAD			Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3
Event: WELL WO	ORK EXPENSE		Start Date	e: 8/18/20	)11			End Date:
Active Datum: RI Level)	Active Datum: RKB @5,119.00ft (above Mean Sea Level)			UWI: S\	W/SE/0/9	/S/21/E/3	5/0/0/6/PM/S/388	.00/E/0/1,770.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/14/2011	7:00 - 17:00	10.00	WO/REP	30		P		7AM [DAY 10] JSADRLG CMT, PSI, PINCH PTS, POOH W/ TBG, RIH W/ TBG, CICR.  SICP=0#. EOT @ 8230'. ESTABLISH CIRCULATION W/ RIG PUMP. DRILL & C/O 46' MEDIUM CMT. FELL THROUGH AT BTM PERF @ 8346'. RIH, TAG CICR @ 8397'.  CIRCULATE WELL CLEAN. P.T. CSG TO 550#. LOST 0# IN 10 MINUTES. R/D SWVL.  8 AM POOH STDG BACK TBG. L/D WORE OUT SMITH CONE BIT. P/U NEW 2-3/8" FLOW TECH SEALED BRG BIT, X-O SUB & RIH ON 2-3/8" TBG.  11:45AM - TAG CICR @ 8397'. R/U SWVL & RIG PUMP. ESTABLISH CIRCULATION W/ RIG PUMP.  12 PM- DRILL OUT WTFRD CICR 1.5 HRS!!  CONTINUE DRILLING & C/O CMT. AVG 30 MIN JT. W/ EOT @ 8528'P.T. TOP SET OF PLUGGED BACK PERFS TO 500#. LOSS 0# IN 10 MINUTES. DRILL & C/O CMT TO 8572'. FELL THROUGH. RIH TO 8656'. CIRCULATE WELL CLEAN. P.T. CSG TO 500#. 0# LOSS IN 10 MINUTES. BTM SET OF PERFS FROM 8642'-8644' CBP @ 8670'. R/D SWVL, PUH W/ EOT @ 8625'.
								5PM SW-SDFN.

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN	-	5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047513950000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-0	9. FIELD and POOL or WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 35 Township: 09.0S Range: 21.0E Meridi	an: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
1/24/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	✓ PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	U TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12 DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	all pertinent details including dates of	·
The operator requ	ests authorization to plug an ned is the plug and abandon you.	d abandon the subject	Approved by the Utah Division of Oil, Gas and Mining
			Date: January 28, 2013
			By: Dork Dunt
NAME (PLEASE PRINT)	PHONE NUMB		
Jaime Scharnowske	720 929-6304	Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 1/24/2013	



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# Sundry Conditions of Approval Well Number 43047513950000

- 1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338. 2. Amend Plug #1: A minimum of 8 sx shall be spotted on the CIBP @ 7930'.
  - 3. All balanced plugs shall be tagged to ensure that they are at the depth specified.
    - 4. All annuli shall be cemented from a minimum depth of 100' to the surface.
  - 5. Surface reclamation shall be done in accordance with R649-3-34 Well Site Restoration.
  - 6. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.
- 7. If there are any changes to the procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.
- 8. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.

1/28/2013 Wellbore Diagram r263 API Well No: 43-047-51395-00-00 Well Name/No: NBU 921-35N4BS Permit No: Company Name: KERR-MCGEE OIL & GAS ONSHORE, L.P. Location: Sec: 35 T: 9S R: 21E Spot: SWSE **String Information Bottom** Diameter Weight Length Coordinates: X: 626722 Y: 4427284 String (ft sub) (inches) (lb/ft) (ft) Field Name: NATURAL BUTTES HOL1 40 20 County Name: UINTAH 14 COND 40 36.7 40 Cement from 40 ft. 200/(L15) (11.459) = 235x HOL3
PROD
Conductor: 14 in. @ 40 ft. outside HOL2 2547 11 2547 8.625 28 2547 7.875 9896 9896 4.5 11.6 9079 2.375 Hole: 20 in. @ 40 ft. \* TOL reported @130' 91-3x propose 92.5x Cement from 2547 ft. to surface 22 Surface: 8.625 in. @ 2547 ft. GRRV **Cement Information** Hole: 11 in. @ 2547 ft. **BOC** TOC String Class Sacks (ft sub) (ft sub) PI-9#4 165x= 210' TOLE 2290' D.K. UK 28 COND 40 **PROD** 9896 130 UK 1874 **SURF** 2547 0 UK 650 3100 + BMSG W **Perforation Information** Top **Bottom** Shts/Ft No Shts Dt Squeeze (ft sub) (ft sub) 5869 9658 (16xx)(1.15)(11.459)=2101 (16xx)(1.15)(11.459)=2101 430 (100 mmmm) F Hog # 1 100 / (1.15)(16459) = 85x **Formation Information** Formation Depth 1492 MHGBN 2385 BMSW 3100 **PARCK** 3235 Cement from 9896 ft. to 130 ft. **8** 644 'ubing: 2.375 in. @ 9079 ft. WSTC 4915 **MVRD** 7641 Production: 4.5 in. @ 9896 ft. Hole: 7.875 in. @ 9896 ft. Hole: Unknown 9658 TD: 9910 TVD: 9691 **PBTD**: 9852

<u>Name: NBU 921-35N4BS</u>

Location: NW SE SE SW Sec 35 T9S R21E

**LAT:** 39.986324 **LONG:** -109.515783 **COORDINATE:** NAD83 (*Surface Location*)

**Uintah County, UT** 

Date: 1/24/13

**ELEVATIONS:** 5100' GL 5119' KB Frac Registry TVD: 9691'

**TOTAL DEPTH:** 9910' **PBTD:** 9851'

**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 2547'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 BT&C @ Surface-9852' and 9895-9896'

4 1/2", 11.6#, P-110 BT&C @ 9852-9895' Marker Joint **4922-4942' and 7593-7613**'

## **PERFORATIONS:**

FORMATION	STATUS	TOP	BOTTOM
WASATCH	CEMENT SQUEEZE	5,869	5,872
WASATCH	CEMENT SQUEEZE	5,880	5,884
MESAVERDE	CEMENT SQUEEZE	7,978	7,980
MESAVERDE	CEMENT SQUEEZE	8,026	8,028
MESAVERDE	CEMENT SQUEEZE	8,108	8,110
MESAVERDE	CEMENT SQUEEZE	8,263	8,265
MESAVERDE	CEMENT SQUEEZE	8,280	8,282
MESAVERDE	CEMENT SQUEEZE	8,344	8,346
MESAVERDE	CEMENT SQUEEZE	8,444	8,446
MESAVERDE	CEMENT SQUEEZE	8,569	8,571
MESAVERDE	CEMENT SQUEEZE	8,642	8,644
MESAVERDE	PERFORATED	8,814	8,815
MESAVERDE	PERFORATED	8,840	8,841
MESAVERDE	PERFORATED	8,944	8,946
MESAVERDE	PERFORATED	8,973	8,975
MESAVERDE	PERFORATED	9,042	9,044
MESAVERDE	PERFORATED	9,112	9,113
MESAVERDE	PERFORATED	9,137	9,138
MESAVERDE	PERFORATED	9,180	9,182
MESAVERDE	PERFORATED	9,216	9,218
MESAVERDE	PERFORATED	9,278	9,280
MESAVERDE	PERFORATED	9,378	9,379
MESAVERDE	PERFORATED	9,480	9,482
MESAVERDE	PERFORATED	9,655	9,658

RECEIVED: Jan. 24, 2013

# **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPACITIES	
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)
2 3/8" 4.7# L-80	11,200	11,780	1.90	0.00387	0.1624
tbg					
4 ½" 11.6# I-80	7780	6350	3.875"	0.0155	0.6528
(See above)					
4 ½" 11.6# P-	10691	7580	3.875"	0.0155	0.6528
110					
2 3/8" by 4 ½"				0.0101	0.4227
Annulus					

TOPS:		<b>BOTTOMS:</b>
1492'	Green River Top	<del></del>
1707	Dind's Nest Ton	

1787' Bird's Nest Top 2385' Mahogany Top 4915' Wasatch Top

3235' Parachute Bottom (MD) 7641' Wasatch Bottom

7641' Mesaverde Top

9910' Mesaverde Bottom (TD)

**T.O.C.** @ 130' (Halliburton CBL - 4/21/2011)

### NBU 921-35N4BS PLUG & ABANDONMENT PROCEDURE

#### **GENERAL**

- H2S MAY BE PRESENT. CHECK FOR H2S AND TAKE APPROPRIATE PRECAUTIONS.
- CEMENT QUANTITIES BELOW ASSUME NEAT CLASS G, YIELD 1.145 CUFT./SX. IF A DIFFERENT PRODUCT IS USED, WELLSITE PERSONNEL ARE RESONSIBLE FOR CORRECTING QUANTITIES TO YIELD THE STATED SLURRY VOLUME. WHEN SQUEEZING, INCLUDE 10% EXCESS PER 1000' OF DEPTH.
- TREATED FRESH WATER WILL BE PLACED BETWEEN ALL PLUGS INSTEAD OF BRINE.
- ALL DISPLACEMENT FLUID SHALL CONTAIN CORROSION INHIBITOR AND BIOCIDE. PREMIX 5 GALLONS PER 100 BBLS FLUID.
- NOTIFY BLM 24 HOURS BEFORE MOVING ON LOCATION.
- A GPS READING WILL NEED TO BE TAKEN AT THE WELL SITE AND RECORDED IN OPENWELLS. PLEASE TAKE IT TO THE 6TH DECIMAL PLACE.

#### **PROCEDURE**

Note: An estimated 173sx of "class G" cement needed for procedure

- 1. MIRU. KILL WELL AS NEEDED. ND WH, NU AND TEST BOP.
- 2. PULL TBG & LD SAME. RU WIRELINE AND MAKE A GAUGE RING RUN TO CHECK FOR FILL. A GPS READING WILL NEED TO BE TAKEN AT THE WELL SITE AND RECORDED IN OPENWELLS. PLEASE TAKE IT TO THE 6TH DECIMAL PLACE.
- 3. PLUG #1, ISOLATE MESAVERDE PERFORATIONS (7979'-9658'): RIH W/ 4 ½" CIBP. SET @ ~7930'. PLACE A MINIMUM OF 35' OF CMT ON TOP OF CIBP WITH WIRELINE DUMP BAILER SO TOP OF CEMENT WILL BE NO DEEPER THAN 7895'.
- 4. PLUG #2, PROTECT TOP OF WASATCH (4915'): RIG DOWN WIRELINE. TIH WITH TUBING TO ~5015'. BRK CIRC W/ FRESH WATER. DISPLACE 16 SX / 3.3 BBL / 18.3 CUFT AND BALANCE PLUG W/ TOC @ ~4805' (210' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED WATER.
- 5. PLUG #3, PROTECT BASE OF PARACHUTE (3258'): PUH TO ~3360'. BRK CIRC W/ FRESH WATER. DISPLACE 16 SX / 3.3 BBL / 18.3 CUFT AND BALANCE PLUG W/ TOC @ ~3150' (210' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED WATER.
- 6. PLUG #4, PROTECT TOP OF MAHOGANY (~2385'): PUH TO ~2500'. BRK CIRC W/ FRESH WATER. DISPLACE 16 SX / 3.3 BBL / 18.3 CUFT AND BALANCE PLUG W/ TOC @ ~2290' (210' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED WATER.
- 7. PLUG #5, PROTECT TOP OF BIRDS NEST (1787') and GREEN RIVER (1492'): PUH TO ~1880'. BRK CIRC W/ FRESH WATER. DISPLACE 33 SX / 6.7 BBL / 37.4 CUFT AND BALANCE PLUG W/ TOC @ ~1450' (430' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED WATER.
- 8. PLUG #6, SURFACE HOLE: POOH. RIH W/ WIRELINE, PERFORATE @ 300' W/ 4 SPF. POOH W/ WIRELINE. RU CEMENT SERVICE TO PROD CSG. PUMP 92 SX / 18.7 BBL / 105.1 CUFT OR SUFFICIENT VOLUME TO FILL ANNULUS AND CASING TO SURFACE.
- 9. CUT OFF WELLHEAD AND INSTALL MARKER PER BLM GUIDELINES.
- 10. RDMO. TURN OVER TO OPERATIONS FOR SURFACE REHAB. SURFACE RECLAMATION TO BE PERFORMED IN ACCORDANCE TO REGULATIONS.

RECEIVED: Jan. 24, 2013

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 01194 ST
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horize n for such proposals.		7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-35N4BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047513950000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 17 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0388 FSL 1770 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 35 Township: 09.0S Range: 21.0E Meri	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
2/4/2013	OPERATOR CHANGE	✓ PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT			
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:
The operator has c the subject well I order to expand attached chronologi	completed operations. Clearly show concluded the plug and abar ocation on 02/04/2013. This and drill the NBU 921-350 ical well history for details a longitude locations. Thank	ndonment operations on is well was plugged in Pad. Please see the and updated latitude and you.	Accepted by the Utah Division of Oil, Gas and Mining
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUM</b> 720 929-6857	BER TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 3/27/2013	

					U	S ROC	KIES RE	EGION		
					Opera	tion S	Summa	ry Report		
Well: NBU 921-3	35N4BS	(YELLOW)		Spud Co	nductor: 2	2/1/2011		Spud Date: 2/1	8/2011	
Project: UTAH-L	JINTAH			Site: NBI	Site: NBU 921-350 PAD			Rig Name No: MILES 3/3		
Event: ABANDO	DNMENT			Start Dat	e: 1/23/20	)13			End Date: 2/4/2013	
Active Datum: R	RKB @5,1	19.00usft (a	bove Mean Se	ea	UWI: S\	W/SE/0/9	/S/21/E/35	/0/0/6/PM/S/388	.00/E/0/1,770.00/0/0	
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
1/23/2013		- 7:15	0.25	MAINT	48	G	Р		HSM, JSA	
		- 9:15	2.00	MAINT	30	G	Р		ROAD DIG FROM NBU 1022-7H4 TO NBU 921-35N4BS	
		- 15:30	6.25	MAINT	30	A	Р		MIRU, 1000# SICP, FLOW WELL TO FLOWBACK TNK, PUMP 30 BBLS T-MAC, COULD NOT KILL WELL, FLOW TO FLOWBACK TNK FOR 2HRS, 300# FCP TRY TO KILL WELL AGIN, STILL COULD NOT KILL WELL, WILL FLOW WELL OVER NIGHT & KILL WELL W/ BRINE IN THE A.M.	
1/24/2013		- 7:15	0.25	MAINT	48		Р		HSM,JSA	
	7:15	- 8:15	1.00	MAINT	30	E	Р		30# FCP, CONTROL WELL W/ 75 BBLS BRINE, ND WH, NU BOP'S, CONTINUE PUMPING BRINE DN CSG TOTAL OF 130BBLS	
	8:15	- 9:30	1.25	MAINT	31	ļ	Р		UNLAND TBG ONLY HAD 5000# OF WEIGHT, TOOH & LD 47-1/2 JTS ON TRAILER (1,504'), SHUT DN WAIT FOR FISHING TOOLS	
	9:30	- 12:30	3.00	MAINT	30	E	Р		PUMP ANOTHER 130BBLS BRINE & 80BBLS DRILLING MUD TO CONTROL WELL	
	12:30	- 13:30	1.00	MAINT	31	В	Р		P/U 3-7/8" OVER SHOT & ONE JT WASH PIPE, 3-7/8" OVERSHOT WON'T FIT THROUGH WEATHERFORD WELLHEAD, WILL HAVE A SMALLER ONE MADE BY MORNING	
	13:30	- 15:30	2.00	MAINT	31	I	Р		P/U 2-3/8" P-110 TBG, TIH & TAG FISH TOP @ 2,219', TOOH W/ 35 STANDS, SWI, SDFN	
1/25/2013	7:00	- 7:15	0.25	MAINT	48		Р		HSM, JSA	
		- 9:15	2.00	MAINT	31	В	Р		24# SICP, BLOW WELL DN, TIH W/ OVERSHOT, X OVER BUSHING, 1 JT WASH PIPE, LATCH FISH @ 2,235 (ON COLLAR BELOW FISH TOP)', PULL UP ON FISH, TBG PULLED FREE @ 28,000# PULL, TOOH & FOUND X OVER BUSHING PARTED	
	9:15	- 10:00	0.75	MAINT	46	F	Р		WAIT FOR WIRELINE TO COME OUT & CUT TBG, ALSO WAIT FOR NEW OVERSHOT TO COME FROM VERNAL	
	10:00	- 10:30	0.50	MAINT	31	В	Р		TIH W/ OVERSHOT ON 2-3/8" TBG, LATCH FISH @ 2,219'	
	10:30	- 12:30	2.00	MAINT	34	A	Р		MIRU CUTTERS WIRELINE, RIH W/ CHEMICAL CUTTER, CUT TBG @ 5,610', POOH W/ WIRELINE, WIRELINE GOT STUCK @ 3,520', PULL OUT OF ROPE SOCKET & POOH	
		- 14:30	2.00	MAINT	31	I	Р		TOOH W/ 2-3/8" TBG, STAND BACK 70 JTS P-110 IN DERRICK, LD 107 JTS JUNK ON TRAILER	
	14:30	- 17:00	2.50	MAINT	31	I	Р		P/U OVERSHOT, TIH W/ 149 JTS 2-3/8" TBG, SWI, SDFWE.	
1/28/2013	7:00	- 7:15	0.25	MAINT	48		Р		HSM, JSA	
		- 8:00	0.75	MAINT	31	В	Р		180# SICP, BLOW WELL DN, TIH LATCH FISH @ 5,603', PULL UP TO 80,000# & TBG CAME FREE	
	8:00	- 8:30	0.50	MAINT	31	I	Р		TOOH W/ 2-3/8" TBG, TBG IS PULLING WET	
	8:30	- 13:00	4.50	MAINT	42	В	Р		MADE 1 SWAB RUN TO 2000', TBG STARTED FLOWING, LET TBG FLOW TO FLOWBACK TNK	

3/27/2013 3:02:32PM 1

# **US ROCKIES REGION**

# **Operation Summary Report**

 Well: NBU 921-35N4BS (YELLOW)
 Spud Conductor: 2/1/2011
 Spud Date: 2/18/2011

 Project: UTAH-UINTAH
 Site: NBU 921-35O PAD
 Rig Name No: MILES 3/3

 Event: ABANDONMENT
 Start Date: 1/23/2013
 End Date: 2/4/2013

Event: ABANDC	NMENI	Start Date	te: 1/23/2013							
	KB @5,119.00usft (	above Mean S	ea	UWI: SV	N/SE/0/9/	/S/21/E/35	S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0			
Level) Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	13:00 - 13:30	0.50	MAINT	30	E	Р	()	PUMP 25BBLS T-MAC (TBG VOLUME) & COULD NOT KILL WELL, ORDER 130BBLS BRINE		
	13:30 - 14:30	1.00	MAINT	46	F	Р		WAIT FOR LOAD OF BRINE		
	14:30 - 15:45	1.25	MAINT	30	E	Р		PUMP 20BBLS BRINE DN TBG, PUMP 95BBLS DN CSG		
	15:45 - 17:00	1.25	MAINT	31	I	Р		TOOH W/ 17 STANDS 2-3/8" TBG, WELL CAME ON AGAIN, SDFN		
1/29/2013	7:00 - 7:15	0.25	MAINT	48		Р		HSM, JSA		
1/30/2013	7:15 - 14:00 7:00 - 7:15	6.75	MAINT	30	E	P P		520# SICP, BLEW WELL DN TO 200# THEN GOT WTR, PUMP 80 BBLS DRILLING MUD TO CONTROL WELL, TBG STILL FLOWING, FLOW TO FLOWBACK TNK, TBG STILL WONT DIE, CALL FLOWBACK CREW & FLOW WELL OVER NIGHT.		
1/30/2013	7:00 - 7:15 7:15 - 10:00	0.25 2.75	MAINT MAINT	48 31	1	P		HSM, JSA		
	7.13 - 10.00	2.75	WAINT	31	'	P		0# FCP, TBG STILL FLOWING WTR, CONTROL TBG /W 30 BBLS BRINE, TOOH W/ 2-3/8" TBG TO OVERSHOT, KILL CSG W/ 100 BBLS BRINE, LD OVERSHOT, TOOH W/ REMAINING TBG		
	10:00 - 12:00	2.00	MAINT	34	I	Р		MIRU CUTTERS WIRELINE, RIH W/ GAUGE RING TO 7,950, POOH, P/U 4-1/2" CIBP, RIH SET CIBP @ 7,930', POOH RD CUTTERS WIRELINE		
	12:00 - 15:00	3.00	MAINT	31	I	Р		TIH W/ 2-3/8" TBG, TAG CIBP @ 7,950', SDFN		
1/31/2013	7:00 - 7:15	0.25	ABANDP	48		Р		HSM, JSA GPS LAT 39.9862247 LONG 109.515820		
	7:15 - 8:00	0.75	ABANDP	51	D	Р		MIRU PRO PETRO, PUMP 20 BBLS FRESH WTR, MIX & PUMP 1 BBL CEMENT ON CIBP, PULL UP 9 JTS REVERSE OUT		
	8:00 - 10:00	2.00	ABANDP	31	I	Р		TOOH, LD 91 JTS 2-3/8" TBG ON TRAILER, PRESSURE TEST CSG AS REQUESTED BY BLM, CSG DID NOT HOLD PRESSURE		
	10:00 - 12:00	2.00	ABANDP	51	D	Р		PUMP 5 BBLS FRESH WTR, MIX & PUMP 16 SX CLASS G @ 15.8 PPG, DISPLACE W/ 15 BBL FRESH WTR, TOOH W/ 5 STANDS TBG, REVERSE OUT TBG, LEAVING BALANCE PLUG FROM 5,015'-4,805', SHUT DN & WAIT FOR CEMENT TO CURE		
2/1/2013	7:00 - 7:15	0.25	ABANDP	48		Р		HSM, JSA GPS LAT 39.9862247 LONG 109.515820		
	7:15 - 9:15	2.00	ABANDP	31	ı	Р		TIH W/ TBG TO TAG BALANCE PLUG, PLUG WAS NOT THERE, TOOH W/ 2-3/8" TBG		
	9:15 - 10:15	1.00	ABANDP	34	I	Р		MIRU CUTTERS WIRELINE, RIH W/ 4-1/2" CIBP, SET CIBP @ 5,015', POOH		
	10:15 - 11:15	1.00	ABANDP	31	I	Р		TIH W/ 2-3/8" TBG, TAG CIBP @ 5,015'		
	11:15 - 12:00	0.75	ABANDP	51	D	Р		PUMP 5 BBLS FRESH WTR, MIX & PUMP 16 SX CLASS G @ 15.8 PPG, DISPLACE W/ 14 BBL FRESH WTR, TOOH W/ 8 JTS, REVERSE OUT		
	12:00 - 12:30	0.50	ABANDP	31	ı	Р		TOOH W/ 2-3/8" TBG TO 3,360'		
	12:30 - 13:30	1.00	ABANDP	51	D	Р		PUMP 5 BBLS FRESH WTR, MIX & PUMP 16 SX CLASS G @ 15.8 PPG, DISPLACE W/ 10 BBL FRESH WTR, TOOH W/ 20 JTS 2-3/8" TBG, REVERSE OUT LEAVING BALANCE PLUG FROM 3,360'-3,140', SWI, SDFWE		
2/4/2013	7:00 - 7:15	0.25	ABANDP	48		Р		HSM, JSA GPS LAT 39.9862247 LONG 109.515820		
	7:15 - 8:00	0.75	ABANDP	31	I	Р		TIH W/ 2-3/8" TBG TO TAG CEMENT PLUG, PLUG WAS NOT THERE, TOOH W/ TBG		

3/27/2013 3:02:32PM 2

Sundry Number: 35984 API Well Number: 43047513950000 **US ROCKIES REGION Operation Summary Report** Spud Conductor: 2/1/2011 Spud Date: 2/18/2011 Well: NBU 921-35N4BS (YELLOW) Project: UTAH-UINTAH Site: NBU 921-350 PAD Rig Name No: MILES 3/3 **Event: ABANDONMENT** End Date: 2/4/2013 Start Date: 1/23/2013 UWI: SW/SE/0/9/S/21/E/35/0/0/6/PM/S/388.00/E/0/1,770.00/0/0 Active Datum: RKB @5,119.00usft (above Mean Sea Date P/U Phase Code Operation Time Duration Sub MD From Start-End (hr) Code (usft) 8:00 - 10:00 2.00 **ABANDP** 34 Ρ 1 MIRU CUTTERS WIRELINE, RIH SET 4-1/2" CIBP @3,360', POOH W/ WIRELINE 10:00 - 10:30 0.50 **ABANDP** 31 Ρ TIH W/ 2-3/8" TBG, TAG CIBP @ 3,360' Т 10:30 - 11:30 Ρ 1.00 ABANDP D PRESSURE TEST CSG, CSG DID NOT HOLD PRESSURE. PUMP 5 BBLS FRESH WTR. MIX & PUMP 16 SX CLASS G @ 15.8 PPG, DISPLACE W/ 12 BBLS FRESH WTR 11:30 - 12:15 0.75 ABANDP 31 Т Ρ TOOH W/ 2-3/8" TBG 12:15 - 12:30 RIH SET 4-1/2" CIBP @ 2,500', POOH W/ WIRELINE 0.25 **ABANDP** 34 Р 12:30 - 12:45 0.25 ABANDP Р TIH W/ TBG, TAG CIBP 2,500' 31 12:45 - 13:00 0.25 D Ρ ABANDP 51 PRESSURE TEST CSG, CSG HELD PRESSURE, PUMP 5 BBLS FRESH WTR, MIX & PUMP 16 SX CLASS G @ 15.8 PPG, DISPLACE W/ 9 BBLS FRESH WTR 13:00 - 13:15 0.25 ABANDP Р TOOH LD 20 JTS2-3/8" TBG 31 13:15 - 13:30 0.25 **ABANDP** D Ρ BALANCE PLUG FROM 1,880'-1,450', PUMP 5 BBLS FRESH WTR, MIX & PUMP 33 SX CLASS G @ 15.8 PPG, DISPLACE W/ 5.6 BBLS FRESH WTR 13:30 - 14:00 TOOH LD 59 JTS TBG ON TRAILER 0.50 **ABANDP** Р 31 Т 14:00 - 14:15 0.25 ABANDP Ρ RIH W/ 1' PERF GUN (4 SHOTS PER FOOT), PERF

Ρ

Ρ

S

Ρ

Ρ

С

D

D

30

34

51

14:15 - 15:00

15:00 - 15:15

15:15 - 15:30

15:30 - 15:45

15:45 - 17:00

ABANDP

**ABANDP** 

**ABANDP** 

**ABANDP** 

**ABANDP** 

0.75

0.25

0.25

0.25

1.25

3/27/2013 3:02:32PM 3

CSG @ 300', POOH, RD WIRELINE

CSG @ 100', POOH, RD WIRELINE

PRESSURE UP ON CSG W/ CEMENT PUMP & COULDEN'T PUMP INTO SURFACE CSG

RIH W/ 1' PERF GUN (4 SHOTS PER FOOT), PERF

PUMP 5 BBLS FRESH WTR, MIX & PUMP 80 SX CLASS G @ 15.8 PPG, CEMENT TO SURFACE

ND BOP'S, NU WH

39.98623 -109.5158

RDMO

## STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS AND MINING

## **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217 Phone Number: (720) 929-6100

#### Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng	County	
4304751395	NBU 921-35N4BS		SWSE	35	98	21E	UINTAH	
Action Code	Current Entity Number	•		pud Da	te	Entity Assignment Effective Date		
B	99999	3900		1	À	/15/11		
Comments: MIRI	U PETE MARTIN BUCKE	TRIG WS7	110			,		

SPUD WELL LOCATION ON 02/01/2011 AT 12:40 HRS.

SPUD WELL LOCATION ON 02/01/2011 AT 16:00 HRS.

BHL SESW

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County	
4304751385	NBU 921-35O1CS		SWSE	35	98	21E	UINTAH	
Action Code	Current Entity New Entity Number Number		S	Spud Date			Entity Assignment Effective Date	
R	99999	2900		2/1/2011		ت	3/15/11	
Comments: MIRU SPU	J PETE MARTIN BUCKE D WELL LOCATION ON	ET RIG. WSMV 02/01/2011 AT 14:4	5 HRS.	BHO	L= 5	WSE		

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751387	NBU 921-35O1BS		SWSE	35	98	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900		2/1/2011		2/15/11	
Comments: MIRI	LPETE MARTIN BLICKE	TRIG /UST	WA			-	, , , , , , , , , , , , , , , , , , , ,

**ACTION CODES:** 

A - Establish new entity for new well (single well only)

**B** - Add new well to existing entity (group or unit well)

C - Re-assign well from one existing entity to another existing entity

D - Re-assign well from one existing entity to a new entity

E - Other (Explain in 'comments' section)

RECEIVED

FEB 0 2 2011

ANDY LYTLE

Name (Please Print) :€

Signature

Title

**REGULATORY ANALYST** 

2/2/2011

BHL= SWSE

Date

(5/2000)